BOX Computers

BOX-PC

Their compact design makes Contec's Box-PCs optimal for embedded applications. Box PC CPUs and chipsets are tailored for embedded computing, while components are selected for their high reliability and stable supply.

Product Lineup

You can choose from a wide variety of models based on application requirements including CPU speed, installation style and expandability.

BOX-PCs

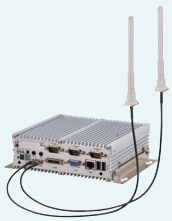
IPC-BX 800 series A-03

CPU: ULV Celeron M 800MHz | Fan-less | Main Memory: 512MB DDR SDRAM | Chipt Set: 852GM

OS: Windows XP Embedded (CF), No OS

IPC-BX800-DC400

IPC-BX800-DC456


IPC-BX800R-DC456

IPC-BX 720 series A-05

CPU: Celeron 2.0GB | Chipt Set: 845GV | Main Memory: Max. 2GB DDR SDRAM

OS: Windows XP Professional (HDD), Windows XP Embedded (SDD)

PCI ×2

IPC-BX 720 series

IPC-BX 360 series A-07

CPU: ULV Celeron 400MHz | Fan-less | Main Memory: 512MB DDR SDRAM

OS: Windows XP Professional (HDD), Windows 2000 Professional (HDD), Windows XP Embedded (SDD), No OS

Card Bus

IPC-BX/M360(PCI)C

IPC-BX 700 series A-09

CPU: ULV Celeron M 1.0GHz | Fan-less | Main Memory: Max. 1GB DDR SDRAM | Chipt Set: 855GME

OS: Windows XP Professional (HDD), Windows XP Embedded (SDD), No OS

IPC-BX700-AC

IPC-BX700P2-AC

IPC-BX700P4-AC

IPC-BX 620 series A-11

CPU: ULV Celeron 400MHz | Fan-less | Main Memory: Max. 512MB SDRAM | Storage: HDD SDD ×

OS: Windows XP Embedded, Windows 2000 Professional, Windows NT Workstation 4.0

Card Bus

IPC-BX/M620(PCW)C

Card Bus

IPC-BX/M620(PCW)CP

Card Bus | PCI/ISA ×2

IPC-BX 630 series A-11

CPU: LV Pentium III 800MHz | Fan-less | Main Memory: Max. 512MB SDRAM | Storage: HDD SDD ×

OS: Windows XP Embedded, Windows 2000 Professional, Windows NT Workstation 4.0

Card Bus

IPC-BX/M630(PCI)C

Card Bus | PCI ×2

IPC-BX/M630(PCI)CP

Card Bus | PCI ×4

IPC-BX/M630(PCI)C4P

Micro Controller Unit - CPU-SB20 Series

A-17

CPU: Geode SC2200 266MHz | Fan-less | Main Memory: 256MB SDRAM 128MB SDRAM

OS: Windows XP Embedded (CF) / No OS

PC CPU Unit (Compliant with Mitsubishi Electric MELSEC-Q Series)

PPC-852 series

A-19

CPU: Celeron M 600MHz | Fan-less | Main Memory: 512MB DDR SDRAM

OS: Windows XP Professional (HDD) / Windows 2000 Professional (HDD) / Windows XP Embedded (CF)

PPC-686 series

A-21

CPU: Mobile Celeron 400MHz | Fan-less | Main Memory: 128MB SDRAM

OS: Windows 2000 Professional (HDD) / Windows NT Workstation 4.0 (HDD) / Windows NT Embedded 4.0 (SDD) / No OS

Contec recommends using its touch-screen Flat Panel Displays with our BOX-PCs.

Flat Panel Displays C-01

Pictograms

CPU

CPU XXXXXXX — Onboard CPU - type and speed.

Fan-less — Fan-less operation - cooled by heat sink.

Easier maintenance and quieter operation are achieved with fan-less systems.

Chipset

Chip Set XXXXXXX — Type of onboard chipset.

Main Memory

Main Memory XXXX DDR SDRAM / Main Memory XXXX SDRAM — Type of main memory and maximum allowable that can be installed.

Video output

DVI (Includes VGA adapter) | Analog RGB — Video signal output interface.

Expansion slot

PCI ×☐ | PCI/ISA ×☐ — Number of user-available slots.

Onboard Devices / Interfaces

LAN — Indicates LAN port.

Dual LAN — Indicates 2 LAN ports.

USB 2.0 — Indicates USB 2.0 port. Number of ports will vary depending on the product.

USB 1.1 — Indicates USB1.1 port. Number of ports will vary depending on the product.

Audio — Indicates AC97-compliant audio output function. Line / mike input supported on some models.

CF (option) — Indicates CF(Compact Flash) slot, enabling HDD-less system configuration.

Box-PCs
Panel-PCs
Flat Panel Displays
Silicon Disk Drives
Option
Box PCs &Panel PCswith Windows CE
Single Board Computer
Chassis / Backplane
Analog I/O
Digital I/O
Counter & Motion Controller
Serial Communication
GPIB Communication
Remote I/O
Expansion Unit / Bus Adapter
Software
Accessories & Cables
Distributed Monitor & Control Network: F&eIT
Multi-Programmable Display
Wireless LAN
Remote Monitoring Solution
Service & Products

IPC-BX 800
IPC-BX 720
IPC-BX 360
IPC-BX 700
IPC-BX 620
IPC-BX 630

BOX-PCs

Box-PCs
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IPC-BX 630

Stable operation under severe operating conditions

High reliability and Environment resistance are achieved

IPC-BX 800 Series

IPC-BX800-DC400

IPC-BX800-DC45F

IPC-BX800R-DC45F

Fanless Ultra Low Voltage Celeron M 800MHz Box-PC 800 series

Ultra Low Voltage Celeron M 800MHz

Chip Set 852GM

Main Memory 512MB DDR SDRAM

Fan-less | LVDS | Analog RGB | LAN | Audio

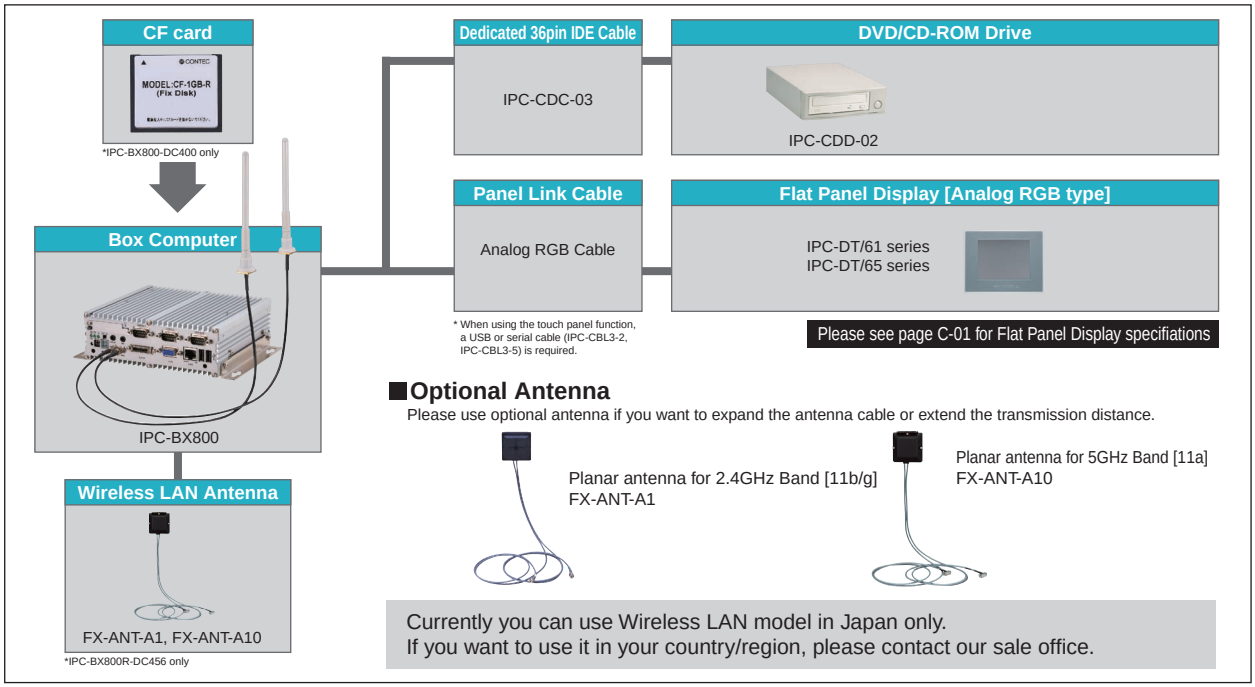
Please see page A-13 for specifications
Dimensions on Page A-13

Model	Storage	OS	Memory
IPC-BX800-DC400	No CF	-	Standard 512MB
IPC-BX800-DC45F	CF 2GB	Windows XP Embedded	
IPC-BX800R-DC45F (Wireless LAN Model)	CF 2GB	Windows XP Embedded	

*1: Windows XP Embedded preinstall (CF) model includes recovery CD-ROM and driver & utility set CD-ROM [IPC-SLIB-01].

CD version user's manuals are included with the units. Optional CD-ROM / DVD-ROM drives are available.

System Configuration



Optional Antenna

Please use optional antenna if you want to expand the antenna cable or extend the transmission distance.

Planar antenna for 2.4GHz Band [11b/g]
FX-ANT-A1

Planar antenna for 5GHz Band [11a]
FX-ANT-A10

Currently you can use Wireless LAN model in Japan only.
If you want to use it in your country/region, please contact our sale office.

BOX-PCs

Features of IPC-BX800 series

Capable of operating from -20°C

These products are equipped with a sensor-controlled internal heater that guarantees a maximum one minute boot at temperatures down to -20oC This heater maintains the system's temperature providing safe operation even if the ambient room temperature is less that 0°C

Stable operation at +60°C

The radiation structure with a built-in heater and the cabinet ensures a stable operation at +60°C.

Vibration resistance and an impact resistance

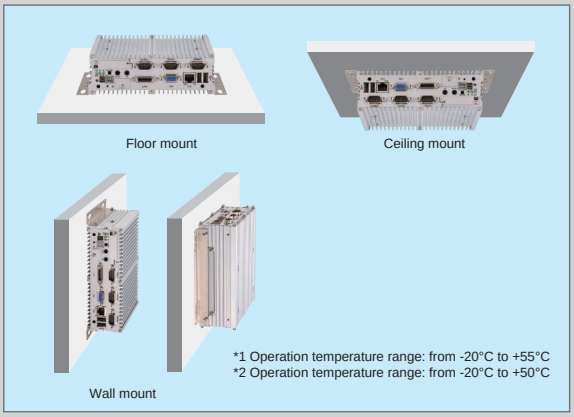
With a vibration resistance of 5G and an impact resistance of 100G, the product can also be used for mobile devices.

High level reliability and quietness

Fan-less and CF card provide high level of reliability and quietness

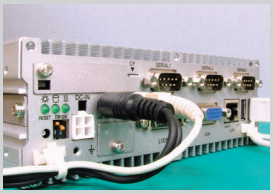
Various installation methods available

Since CF card and sealed structure free the products from installation limitations, they can be installed on a ceiling, wall or floor using the attached metal fixings.

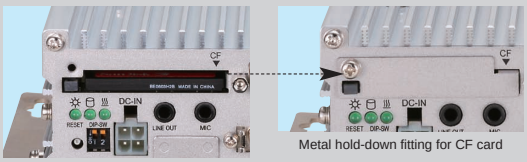

Floor mount
Ceiling mount
Wall mount
*1 Operation temperature range: from -20°C to +55°C
*2 Operation temperature range: from -20°C to +50°C

Safety design

Insulation lock clamps and metal hold-down fitting for CF card prevent unnecessary troubles.



Example of insulation lock clamps



Metal hold-down fitting for CF card

Wireless LAN security

The IPC-BX800 series includes WSL, the original cryptographic code as well as WPA and WEP, making it ideal for business use. You also can use these products with the CONTEC wireless LAN products for providing you the best solution.

Fail-safe Automatic Shut Down

If there are problems with power voltage or temperature, these systems automatically shut down with user's setting. Retention of CMOS data by EEPROM allows the systems to start up even when the battery is off. Windows XP Embedded EWF function also allows the power to be switched off without shutting down the system.

*Only the data in EWF function partitions can be saved.
*If the power is shut down when you are renewing the data is not effective for EWF, file systems are likely to be broken. Please note.

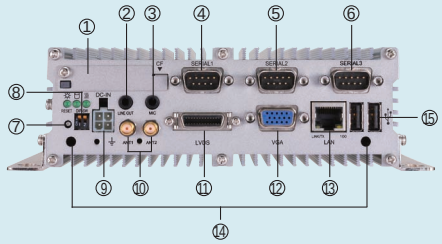
Wide range power supplies (12 - 24VDC)

These products supports a wide range of power supplies (12 - 24VDC) allowing the power to be supplied even from the battery inside a mobile device.

All interfaces are located at the front panel for ease of operation

The IPC-BX800 Series feature a wide variety of interfaces, including two USB 2.0 ports, three RS-232C ports and 100BASE-TX LAN. They have analog RGB and LVDS video interfaces providing dual view capability.

■Comments of Interfaces



Front

<Left side>

Comments of Interfaces

① CF card slot
② Line out
③ Mic
④ COM 1
⑤ COM 2
⑥ COM 3
⑦ Reset
⑧ Mode Switch
⑨ DC power input
⑩ Wireless LAN antanna*
⑪ LVDS
⑫ Analog RGB
⑬ LAN port
⑭ Cable clamp hole
⑮ 2 × USB2.0
⑯ Master/Slave setting of CF card
⑰ Primary IDE connector (36-pin)

*Only for IPC-BX800R-DC456 (Wireless LAN model)

■Options

Name	Description
Memory (PC2700 DDR SDRAM, No Parity)	
IPC-CDD-02 *1	CD-ROM/DVD-ROM drive
Cable	
IPC-CDC-03	CD-ROM/DVD-ROM drive cable (400mm)

*1 Requires dedicated connecting cable IPC-CDC-03 (optional). Bundled cable can not be used.

Name	Description
CF card (only for IPC-BX800-DC400)	
CF-1GB-R	CF 1GB
CF-2GB-R	CF 2GB
CF-4GB-R	CF 4GB
CF-8GB-R	CF 8GB

Box-PCs
Panel-PCs
Flat Panel Displays
Silicon Disk Drives
Option
Box PCs &Panel PCswith Windows CE
Single Board Computer
Chassis / Backplane
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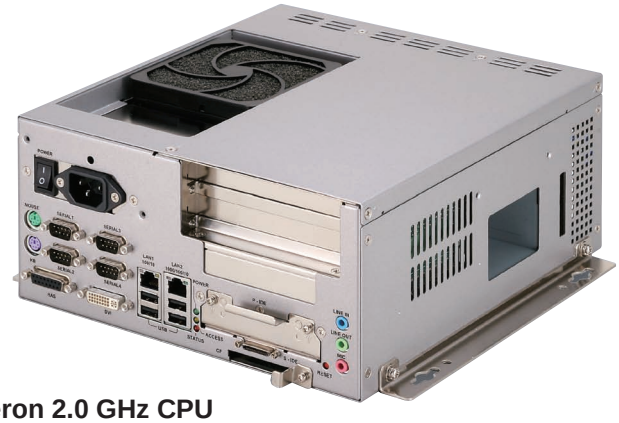
IPC-BX 620
IPC-BX 630

Wide range of expansion, easy maintenance

CONTEC Box Computer for control, communication, data acquisition and data analysis

IPC-BX 720 Series



Embedded Intel® Celeron 2.0 GHz CPU High Speed Box Computer

Celeron 2.0GHz | Chip Set 845GV | Main Memory Max. 2GB DDR SDRAM | CE | DVI (Includes VGA adapter) | Dual LAN | Audio

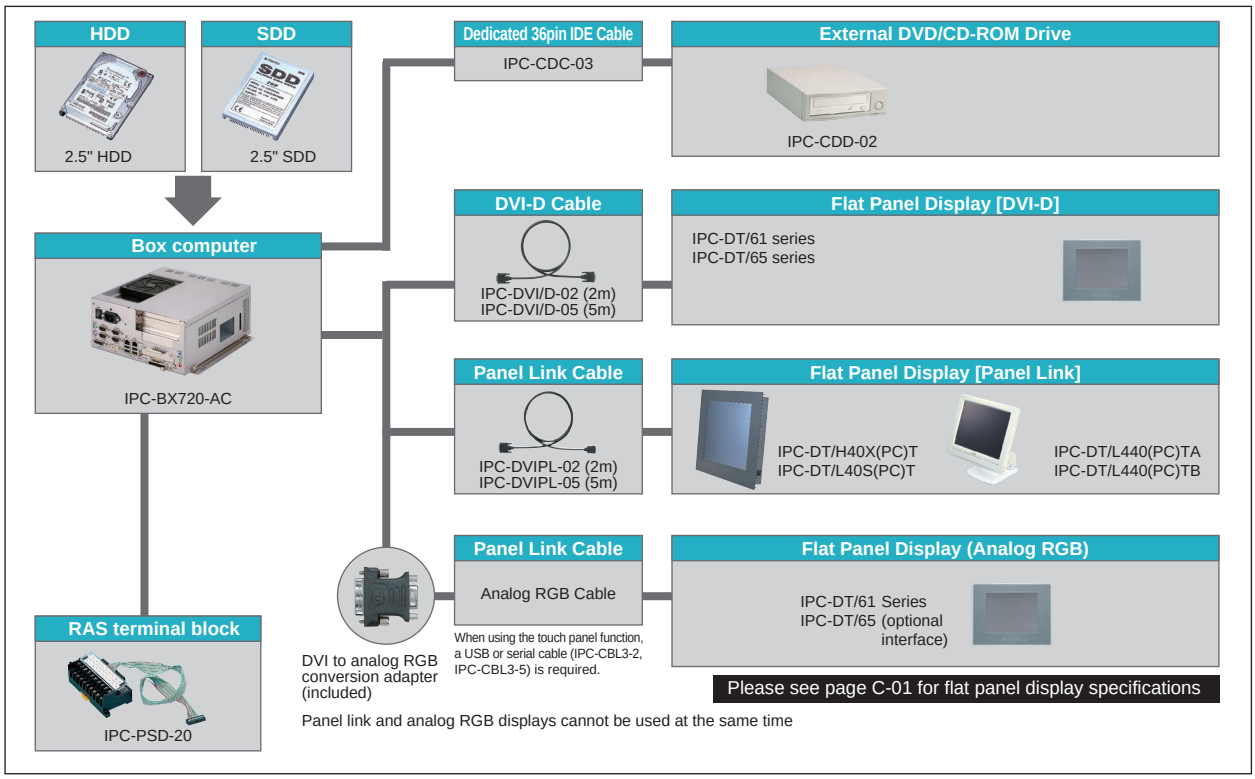
Please see page A-14 for specifications
Dimensions on Page A-16

Model	Storage	OS	Memory
IPC-BX720-AC41G *1	HDD	Windows XP Professional	Max. 2GB (1GB × 2)
IPC-BX720-AC42F *2	Silicon Disk Drive (1GB)	Windows XP Embedded	

*1: CONTEC cannot guarantee continuous normal operation of a standard 2.5" HDD when used on a 24-hour basis. Non-stop use will drastically reduce its life expectancy. When operating on a 24-hour basis CONTEC recommends the use of a silicon disk drive (SDD).
*2: Windows XP Embedded preinstall (Slicon disk) model includes recovery CD-ROM and driver & utility set CD-ROM [IPC-SLIB-01].

CD version user's manuals are included with the units. Optional CD-ROM / DVD-ROM drives are available.

■System Configuration

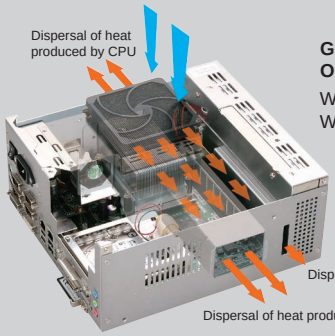


Features of IPC BX 720 series

High-performance Intel® Celeron 2.0GHz CPU

FEATURES CONTEC's DUCT COOLING SYSTEM

CONTEC's IPC-BX720 features a unique, virtually dustproof, highly efficient cooling system. Utilizing the intake fan installed on the top, it provides cooling directly to the CPU. Heat produced by the processor is then directed out through the ducts located on the either side of the unit.

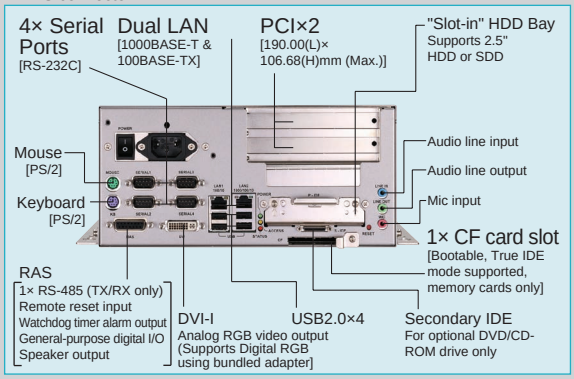


GUARANTEED OPERATING TEMPERATURE

With SDD Installed: 0 - 50ºC
With HDD Installed: 0 - 45ºC

EXPANSION INTERCONNECTIONS

- 2× PCI slots
- 6× serial ports - 5x RS-232C (1× for touch-panel connection)
- 1× RS-422A/485 (located in RAS connector)
- 2× LAN (1× 1000BASE-T / 1× 100BASE-TX)
- CF slot (bootable)
- RAS connector



EASY MAINTENANCE

All expansion & connectors are on the front panel for ease of operation

SYSTEM FAN
Long life, easily replaceable

- Estimated 6 year operating life when unit is operated in a 40ºC ambient environment
- Equipped with replaceable anti-dust filter.

*Time-saving replacement of either fan or filter is easily done without having to remove the top cover.

LOCKING POWER CONNECTOR

- This tamperproof design, not generally found on PCs, prevents the power cable from being accidentally unplugged during operation or maintenance.

DVI-I to analog RGB adapter (included)

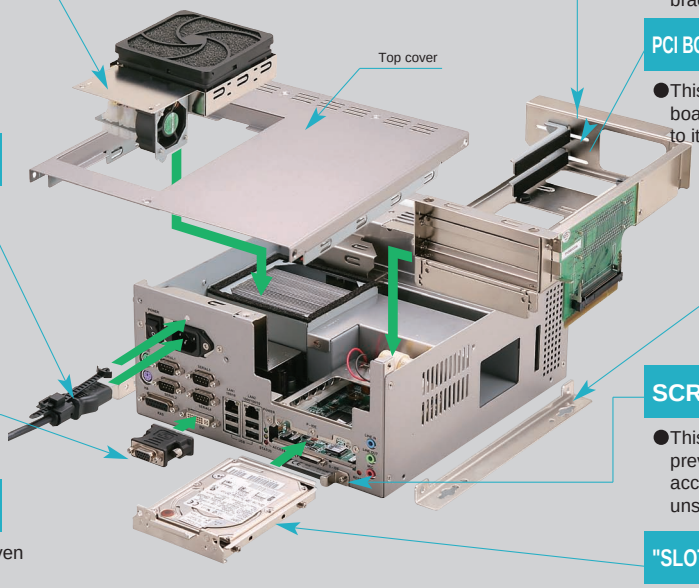
BIOS Setting Backup
BIOS setting (CMOS) data are stored into EEPROM.

- System starts up normally even if battery was discharged.

DISK WRITE PROTECTION
enables instant off on Windows XP Embedded / SDD models

- Enhanced Write Filter(EWF) function of Windows XP Embedded emulates disk write operations into memory. Whenever the power off, it never affect to original data on the storage.

High reliability & Safe development



PCI RISER BRACKET

- Mounting and replacement of PCI boards is made easy with this removable board bracket.

PCI BOARD HOLD DOWN CLAMP

- This clamp keeps add-on boards firmly seated, adding to its vibration resistant.

SCREW CLAMP

- This tamperproof design prevents CF card from accidentally coming unseated.

"SLOT-IN HARD DRIVE BAY"

- Slot-in design enables easy installation and replacement of disk drive from the front panel of the system
- Vibration resistant design

STABLE SUPPLY

Embedded CPU, chipset and system components were chosen to enable a long-life design and to ensure a stable supply.

■Options

Name	Description
Memory (PC2700 DDR SDRAM, No Parity)	
PC-MDD512-184A	DDR SDRAM DIMM Memory 512MB
PC-MDD1G-184A	DDR SDRAM DIMM Memory 1GB
Terminal block for RAS connector	
IPC-PSD-20	Terminal block complete with general-purpose I/O connecting cable
CD-ROM/DVD-ROM Drive	
IPC-CDD-02	DVD/CD-ROM External Drive *1

*1: Optional cable IPC-CDC-03 is required separately.

Name	Description
Cable	
IPC-CDC-03	Cables for DVD(CD-ROM) drive (400mm)
Replacement parts	
IPC-FAN9225S	Cooling fan (92×25mm)
IPC-FAN4020S	Cooling fan (40×20mm)
IPC-FLT92	Fan filter (92×25mm, 10pcs)

BOX-PCs

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IPC-BX 360
IPC-BX 700
IPC-BX 620
IPC-BX 630

Sophisticated Ultra-Compact Design, Easy Installation and Maintenance
Dual LAN

IPC-BX 360 Series

Fanless, Ultra Low Voltage Celeron 400MHz Box-PC 360 Series

Ultra Low Voltage Celeron 400MHz | Chip Set: CLE266 | Main Memory: 512MB DDR SDRAM | Fan-less | CE | PCMCIA (CardBus) | DVI (Includes VGA adapter) | LAN | Audio

Shown here with optional power unit (IPC-POAW/10-01)

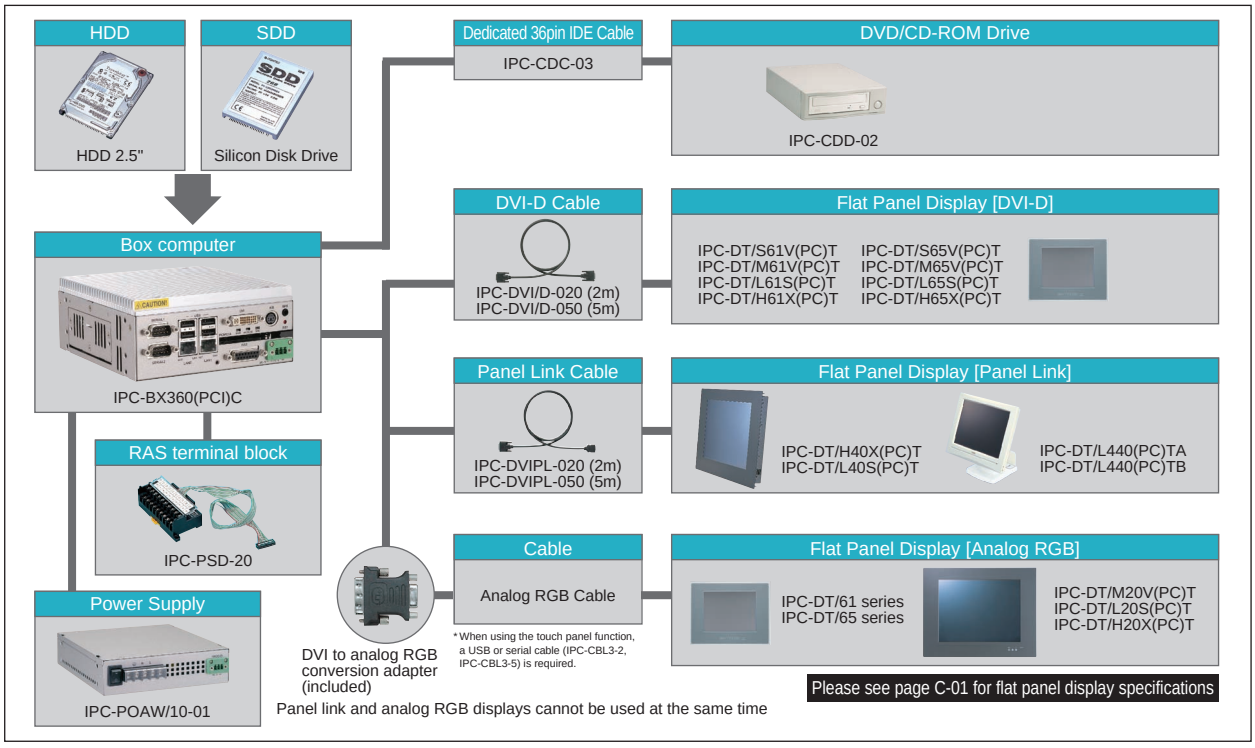
Please see page A-14 for specifications
Dimensions on Page A-16

IPC-BX/M360(PCI)C

*Contec cannot guarantee that a 2.5" HDD will operate normally when used on a 24-hour basis. This type of use will drastically reduce the service life of the drive. Contec recommends the use of a silicon disk drive (SDD) when operating on a 24-hour basis.

User's manual shipped on CD. Optional CD-ROM / DVD-ROM drives are available.
Manuals can be downloaded from our website. (http://www.contec.com/download/)

■System Configuration

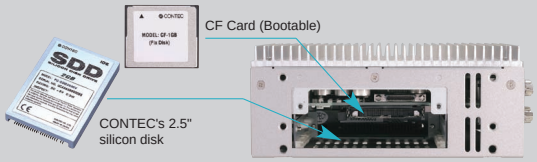


BOX-PCs

Features of IPC-BX 360 Series

System configuration with no mechanical moving parts (disk or fans)

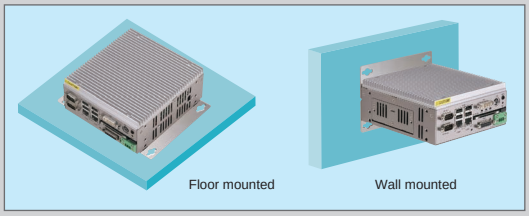
The highest reliability and a virtually noise & dust free system is achieved when using one of Contec's Silicon Disk Drives (PC-SDDV Series) or a compact flash card.



*: Compact Flash needs to be configured by the end user. There are no restrictions on the capacity of the CF card.

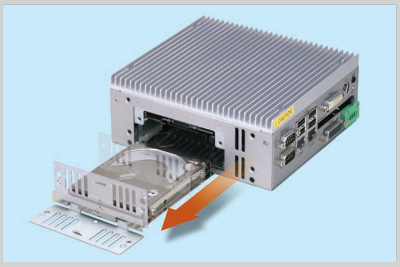
Various installations

The bracket provided allows for wall as well as floor installation.

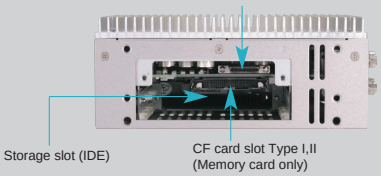


Slot-in type drive bay for easy maintenance

A slot-in type bay is used for installing a 2.5" stora ge device (HDD, SDD). The DVD/CD-ROM connector and CF card slot are located in the storage bay for easier maintenance.



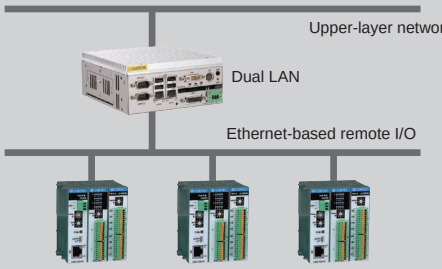
DVD/CD-ROM drive connector
(The HDD and IDE cable are sold separately.)



I/O expansion using Ethernet-based remote I/O (F&eIT)

Ethernet-based remote I/O (F&eIT Series) allows expansion I/O for central monitoring, measurement and control.

Ethernet-based remote I/O L-03



Mulitple interface options for ease of connecting with peripheral equipment

A wide array of interface options is provided to support varying peripherals.

Shutdown Not Required

(When using Windows XP Embedded + silicon disk, EWF function enabled)

Enabling the EWF function (from command prompt) allows you to turn off the power without shutting down the unit.

(EWF: A function exclusively provided by Windows XP Embedded. It emulates the writing of storage onto main memory thereby eliminating the need for actual writing.)

High-definition DVI video output (Analog RGB conversion adapter provided)

DVI interface is employed for video output to minimize degradation. The Display is connected to the unit with a single DVI cable carrying both the video and touch-screen signals.

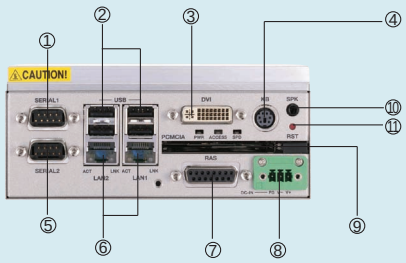
Powerful & Power-saving

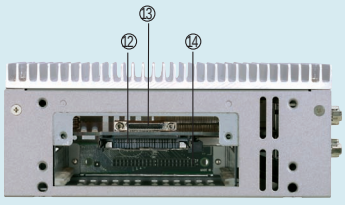
This series is equipped with ultra-low voltage version Intel® Celeron 400MHz processor, both a power-saving and high-performance CPU, as well as 512MB DDR SDRAM.

Stable supply

Components are carefully selected to ensure a long-term stable supply, which include CPU and chipset that were tailored for embedded computing.

■ Comments of Interfaces





<Left side>

Comments of Interfaces

① COM 1
② 4× USB2.0
③ DVI
④ Keyboard*1
⑤ COM 2
⑥ 100BASE-TX / 10BASE-T ×2
⑦ RAS
⑧ DC-IN
⑨ PC card slots (CardBus -compliant)
⑩ Line listing
⑪ Reset
⑫ Compact Flash slots
⑬ Secondary-IDE
⑭ HDD

*1: PS/2 mouse can be connected using the keyboard/mouse cable that is provided.

■ Options

Name	Description
Terminal block for RAS connector	
IPC-PSD-20	Terminal block complete with general-purpose I/O connecting cable
Power Supply	
IPC-POAW/10-01	AC - DC power supply Input: 100-240VAC, Output: 10VDC
CD-ROM/DVD-ROM Drive	
IPC-CDD-02	DVD/CD-ROM External Drive *1
Cable	
IPC-CDC-03	Cables for DVD(CD-ROM) drive (400mm)

Name	Description
Manual	
IPC-BX/360(PCI)-HME	English manual of IPC-BX/360(PCI)
Others	
IPC-SLIB-01	Driver & Utility software (CD-ROM)
Compact Flash	
CF-1GB	1GB CompactFlash for FixDisk
CF-512MB	512MB CompactFlash for FixDisk

*1: Optional cable IPC-CDC-03 is required separately.

BOX-PCs

Box-PCs
Panel-PCs
Flat Panel Displays
Silicon Disk Drives
Option
Box PCs &Panel PCswith Windows CE
Single Board Computer
Chassis / Backplane
Analog I/O
Digital I/O
Counter & Motion Controller
Serial Communication
GPIB Communication
Remote I/O
Expansion Unit / Bus Adapter
Software
Accessories & Cables
Distributed Monitor & Control Network: F&eIT
Multi-Programmable Display
Wireless LAN
Remote Monitoring Solution
Service & Products

IPC-BX 800
IPC-BX 720
IPC-BX 360
IPC-BX 700
IPC-BX 620
IPC-BX 630

Multiple Functions - Compact Body

Shoebox-size Embedded PC

IPC-BX700-AC

IPC-BX700P2-AC

IPC-BX700P4-AC

IPC-BX 700 Series

Fanless Ultra Low Voltage Celeron M 1.0GHz Box-PC 700 series

Ultra Low Voltage Celeron M 1.0GHz | Chip Set 855GME | Main Memory Standard 512MB Max. 1GB | Fan-less | Analog RGB | LAN | Audio

Please see page A-15 for specifications
Dimensions on Page A-16

Preinstalled OS (Storage)	Expasion Slot	Model
None	None	IPC-BX700-AC400
	PCI/ISA ×2	IPC-BX700P2-AC400
	PCI ×2, PCI/ISA ×2	IPC-BX700P4-AC400
Windows XP Professional(Hard Disk)	None	IPC-BX700-AC41G
	PCI/ISA ×2	IPC-BX700P2-AC41G
	PCI ×2, PCI/ISA ×2	IPC-BX700P4-AC41G
Windows XP Embedded(Silicon Disk)	None	IPC-BX700-AC42F
	PCI/ISA ×2	IPC-BX700P2-AC42F
	PCI ×2, PCI/ISA ×2	IPC-BX700P4-AC42F

Windows XP Professional preinstalled model includes OS install CD-ROM(DSP) and drivers & utilities set CD-ROM[IPC-SLIB-01].
Windows XP Embedded preinstall (Slicon disk) model includes recovery CD-ROM and driver & utility set CD-ROM [IPC-SLIB-01].

◎Method of power off without shundown

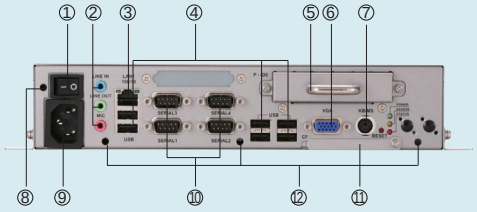
Windows XP Embedded + Silicon Disk enables EWF function (set by Command Prompt of OS).
*** EWF function is one of the unique function of Windows XP Embedded that can emulate disk writing by writing into memory, instead of writing in storage.**

BOX-PCs

Feathers of IPC-BX 700 series

- Ultra Low Voltage Intel® Cerelon® Processor 1.0GHz (FSB 400MHz) CPU and 512MB memory
- Natural air-cooled fan-less system
- Reliable, virtually noiseless operation when used with CONTEC's silicon disk drives
- Embedded CPUs and chipsets contribute to long-life availability
- CONTEC customized BIOS [Phoenix Technologies, Ltd.] provides BIOS level support
- Various interfaces include CF card (Type I, bootable), Audio (AC97 compliant), 100BASE-TX and Serial (RS-232C) ×4, USB2.0×6 are on-board.
- External secondary-IDE connector for optional CD-ROM
- CMOS data can be stored on EEPROM, providing system boot-up even if the battery is discharged
- All the interfaces are on the front panel, and adopt the Slot-in mothed that can mount/dismount storage disk easily.
- Parts that avoid breaking off, such as AC power with clamp and Dedicated metal fittings for CF card
- Compatible with the conventional products [IPC-BX 630/620/600 series]

- Front -



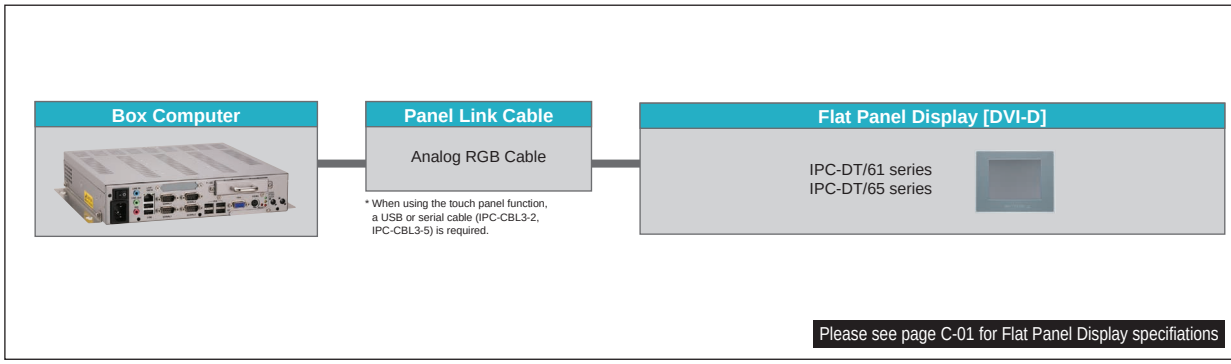
- Right side -

Comments of Interface

① Power switch
② Line in
Line out
Mic
③ LAN port
④ USB2.0 ×6
⑤ Slot-in / Storage bay
[Primary IDE Master]
⑥ Analog RGB
⑦ PS/2 Keyboard & Mouse
(2 in 1Y-cabele included)
⑧ AC power clamp hole
⑨ AC inlet
⑩ RS-232C ×4
⑪ CF card
[Secondary IDE Slave]
• Type I memory card
• OS boot
• Metal fittings
⑫ Cable clamp hole
⑬ 40-pin IDE
(IDE cable included)
[Secondary IDE Master]
⑭ IDE device power
(Power cable included)

Easy to maintain
Opional IDE 5-inch bay-mount DVD/CD-ROM drive can be connected.
* Other devices cannot be connected, such as a Hard disk.

■Comments of Interfaces


Box Computer
Panel Link Cable
Analog RGB Cable
* When using the touch panel function, a USB or serial cable (IPC-CBL3-2, IPC-CBL3-5) is required.
Flat Panel Display [DVI-D]
IPC-DT/61 series
IPC-DT/65 series

Please see page C-01 for Flat Panel Display specifiations

■Options

Name	Description
CF card (Fixed Disk compliant)	
CF-1GB-R	CF 1GB
CF-2GB-R	CF 2GB
CF-4GB-R	CF 4GB
CF-8GB-R	CF 8GB

Box-PCs
Panel-PCs
Flat Panel Displays
Silicon Disk Drives
Option
Box PCs &Panel PCswith Windows CE
Single Board Computer
Chassis / Backplane
Analog I/O
Digital I/O
Counter & Motion Controller
Serial Communication
GPIB Communication
Remote I/O
Expansion Unit / Bus Adapter
Software
Accessories & Cables
Distributed Monitor & Control Network: F&eIT
Multi-Programmable Display
Wireless LAN
Remote Monitoring Solution
Service & Products

IPC-BX 800
IPC-BX 720
IPC-BX 360
IPC-BX 700
IPC-BX 620
IPC-BX 630

BOX-PCs

Box-PCs
Panel-PCs
Flat Panel Displays
Silicon Disk Drives
Option
Box PCs &Panel PCswith Windows CE
Single Board Computer
Chassis / Backplane
Analog I/O
Digital I/O
Counter & Motion Controller
Serial Communication
GPIB Communication
Remote I/O
Expansion Unit / Bus Adapter
Software
Accessories & Cables
Distributed Monitor & Control Network: F&eIT
Multi-Programmable Display
Wireless LAN
Remote Monitoring Solution
Service & Products

IPC-BX 800
IPC-BX 720
IPC-BX 360
IPC-BX 700
IPC-BX 620
IPC-BX 630

Multiple Functions - Compact Body

Shoebox-size Embedded PC

IPC-BX 620 Series

Fanless Ultra Low Voltage Celeron 400MHz Box-PC 620 series

Please see page A-15 for specifications
Dimensions on Page A-16

Ultra Low Voltage Celeron 400MHz | Chip Set 815E | Main Memory Max. 512MB SDRAM | Fan-less | PCMCIA (CardBus) | DVI (Includes VGA adapter) | LAN | Audio

■1× PC Card slot

IPC-BX/M620(PCW)C

■1× PC Card slot, 2× PCI/ISA Bus slot

IPC-BX/M620(PCW)CP

* 4 expansion slot models are also available. Please contact our sales office.
*Contec cannot guarantee that a 2.5" HDD will operate normally when used on a 24-hour basis. This type of use will drastically reduce the service life of the drive. Contec recommends the use of a silicon disk drive (SDD) when operating on a 24-hour basis.

User's manual shipped on CD. Optional CD-ROM / DVD-ROM drives are available.
Manuals can be downloaded from our website. (http://www.contec.com/downloard/)

IPC-BX 630 Series

Fanless Ultra Low Voltage Pentium III 800MHz Box-PC 630 series

Please see page A-15 for specifications
Dimensions on Page A-16

Low Voltage Pentium III 800MHz | Chip Set 815E | Main Memory Max. 512MB SDRAM | Fan-less | PCMCIA (CardBus) | DVI (Includes VGA adapter) | LAN | Audio

■1× PC Card slot

IPC-BX/M630(PCI)C

■1× PC Card slot, 2× PCI Bus slot

IPC-BX/M630(PCI)CP

■1× PC Card slot, 4× PCI Bus slot

IPC-BX/M630(PCI)C4P

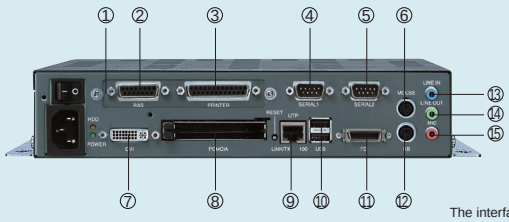
*DC input models are also available. Please contact our sales office.
*Contec cannot guarantee that a 2.5" HDD will operate normally when used on a 24-hour basis. This type of use will drastically reduce the service life of the drive. Contec recommends the use of a silicon disk drive (SDD) when operating on a 24-hour basis.

User's manual shipped on CD.
Manuals can be downloaded from our website. (http://www.contec.com/downloard/)

BOX-PCs

Features of IPC-BX620, 630 series

- Low Voltage Intel® Cerelon® Processor 400MHz (FSB 100MHz) CPU and 256MB memory (IPC-BX620 series)
- Low Voltage Intel® Pentium® III Processor 800MHz (FSB 133MHz) CPU and 256MB memory (IPC-BX630 series)
- Natural air-cooled Fan-less system
- Reliable, virtually noiseless operation when used with CONTEC's PC-SDD V Series silicon disk drives
  (Silicon disks are ideal for use in harsh environments such as those experiencing extremes in temperature, humidity or vibration)
- Embedded CPUs and chipsets contribute to long-life availability
- CONTEC customized BIOS [Phoenix Technologies, Ltd.] provides BIOS level support
- Interfaces include PCMCIA (CardBus compliant), Audio (AC97 compliant), 100BASE-TX and RAS
- External secondary-IDE connector for optional CD-ROM
- DVI video output (VGA conversion adapter included)
- CMOS data can be stored on EEPROM, providing system boot-up even if the battery is drained.

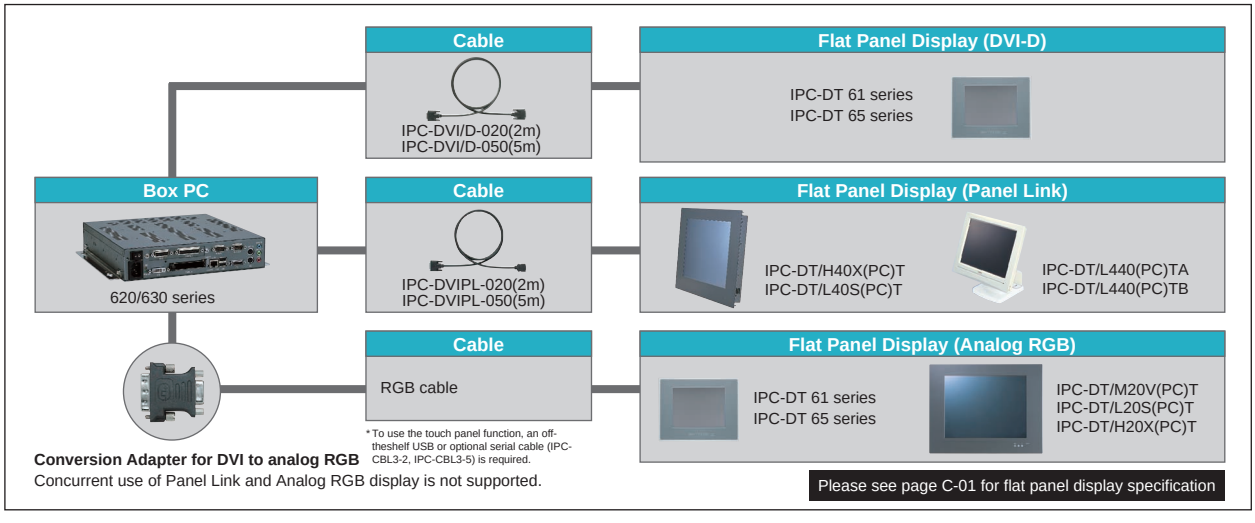


The interface configuration is the same on all models.

Comments of Interface

① Serial Port 3, 4 (RS-232C, RS-422/485) are converted by replacing the bracket.
② RAS
③ Printer
④ Serial Port 1
⑤ Serial Port 2
⑥ Mouse
⑦ DVI
⑧ PC Card slot
⑨ 10BASE-T/100BASE-TX
⑩ USB 2ch
⑪ FD
⑫ Keyboard
⑬ Line input
⑭ Line output
⑮ Mic
⑯ 620 series: PCI/ISA expansion slot
630 series: PCI expansion slot

■Connections



* To use the touch panel function, an off-theshelf USB or optional serial cable (IPC-CBL3-2, IPC-CBL3-5) is required.

Conversion Adapter for DVI to analog RGB
Concurrent use of Panel Link and Analog RGB display is not supported.

Please see page C-01 for flat panel display specification

■Options

Name	Description
Memory (144-pin SO-DIMM)	
PC-MSD256-144V	256MB SD Memory
Floppy Disk Drive	
PC-FDD25BH	3.5-inch FDD drive (an attached cable)
CD-ROM / DVD-ROM drive	
IPC-CDD-02	CD-ROM / DVD-ROM drive (an attached cable)
Terminal for RAS connector	
IPC-PSD-20	Terminal with an attached cable for general-purpose I/O
Others	
IPC-SLIB-01	Driver & Utility software (CD-ROM)

■IPC-BX620 series

Name	Description
Memory (144-pin SO-DIMM)	
PC-MSD128-144H	128MB SD Memory
Manual	
IPC-BX/M620(PCW)-HME	English manual of IPC-BX/M620(PCW)

■IPC-BX630 series

Name	Description
Manual	
IPC-BX/M630(PCI)-HME	English manual of IPC-BX/M630(PCI)

BOX-PCs

■Specifications

Model		IPC-BX800-DC400	IPC-BX800-DC45F	IPC-BX800R-DC45F
CPU		Ultra Low Voltage Intel® Cerelon® Processor 800MHz (FSB400MHz)		
Chipset		Intel® 852GM+ICH4		
Memory	Main Memory	512MB, 1× 200-pin SO-DIMM socket, PC2100(DDR266) DDR SDRAM		
PC Card slot		-		
CF Card slot		1× CF CARD Type I (dedicated to memory card), bootable (PrimaryMaster, PrimarySlave selectable)		
		-	CF on board (2GB) *1	
Wire LAN	I/F	1× 100BASE-TX/10BASE-T, RJ-45 connector		
	Controller	Bulit in Intel ICH4		
Wireless LAN		-		IEEE802.11a/b/g compliant (see the following Wireless LAN spec.)
Expansion Bus slot		-		
System Resolution		640×480(16,770,000 colors), 800×600(16,770,000 colors), 1,024×768(16,770,000 colors), 1,280×1,024(16,770,000 colors)*2, 1,600×1,200(16,770,000 colors)*2		
CRT I/F		Analog RGB I/F×1 (15-pin HD-SUB×1), LVDS I/F×1 (26-pin Half Pitch×11)		
LCD I/F		-		
Keyboard I/F		*3		
Mouse I/F		*3		
FDD I/F		-		
IDE I/F		Recovery hard disk, 36-pin Half Pitch connector (Primary connection of CD-ROM/DVD-ROM drive by optional cable) (Left side)		
Serial I/F		RS-232C(general-purpose): 3ch (SERIAL PORT1, 2, 3) 9 pin D-SUB male connector; Baud rate: 50~115,200bps; Touch panel: 1ch (SERIAL PORT4) [inside the LVDS connector]; Start control microcomputer communication: 1ch (SERIAL PORT5) *4		
Parallel I/F		-		
USB I/F		2ch (USB2.0 compliant)		
General-purpose I/O		-		
Audio		AC97 compliant, Line In, Line Out, MIC: mini jack		
RAS function		WDT: software programable, 255 level (1sec to 255sec); RESET when time-up occurs		
RTC/CMOS		Lithium backup battery life: 10 years or more		
Supported OS		Windows XP Embedded		
Power Supply / Instantaneous Blackout		12~24VDC / -		
Current Consumption (Max.)		Common: 12V 2.2A / 24V 1.1A; Heater ON: 12V 5.6A / 24V 2.8A		
Power Outage		-		
Dielectric Strength		-		
Operating Temp. / Storage Temp. / Humidity		-20~60°C *6 / -10~60°C / 10~90%RH (no condensation)		
Floating Dust Particles / Corrosive Gases		Normal / None		
Noise resistance	Atmospheric discharge	Contact discharge / ±4kV (IEC61000-4-2Level2, EN61000-4-2Level2), Atmospheric Discharge / ±8kV (IEC61000-4-2Level3, EN61000-4-2Level3) *		
	Line-noise	AC line/±2kV *5, Signal line/±1kV (IEC61000-4-4Level3, N61000-4-4Level3)		
Vibration Resistance	Sweep Resistance	10~57Hz / semi-amplitude 0.375mm 57 - 150Hz / 5.0G, 40 min. each in x, y, and z directions (JIS C0040 compliant, IEC68-2-6 compliant)		
Impact Resistance *12*15*16		100G, half-sine shock for 6 ms in x, y, and z directions (JIS C0041 compliant, IEC68-2-27 compliant)		
Grounding		Class D grounding (previous class 3 grounding)		
Dimensions (mm)		166(W)×152(D)×56(H)		
Weight		Approx. 1.6kg		

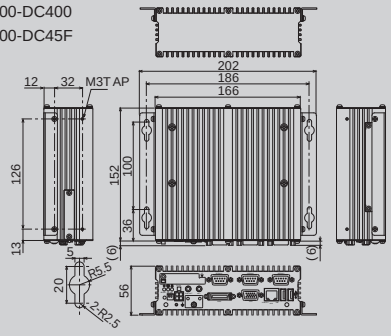
Note:
*1: CF size is calculated based on that 1GB is 100,000,000 byte. The size recognized by OS may be sometimes less than the actual value.
*2: LVDS I/F not supported. *3: Using USB I/F to connect keyboard, mouse or FDD is recommended.
*4: User cannot use it. *5: When using AC-DC power unit [LDA100W-24-SN]
*6: According to the direction of mounting *7: The product is equiped with condensation proof sheet, but we do not guarantee prevention performance.

■Wireless LAN Specifications

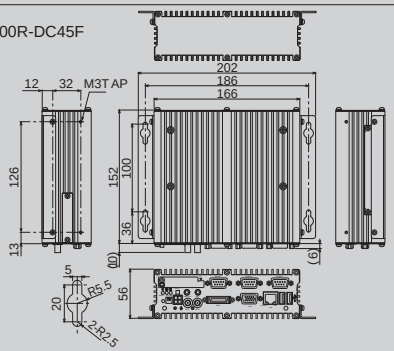
Model		IPC-BX800R-DC45F
Wireless LAN		
IEEE802.11a		
	Interface type	IEEE802.11a-compliant OFDM (Orthogonal Frequency Division Multiplexing) method
	Channel	12ch (34,38,42,46ch[J52]; 36,40, 44,48ch[W52]; 52,56,60,64ch[W53])
	Data Speed	54, 48, 36, 24, 18, 12, 9, 6Mbps
	Access Method	CSMA/CA + ACK (RTS/CTS)
	Wireless LAN category	Low-power Data Transmission System (5.150~5.350GHz)
	Aerial Power	10Mw/MHz or less
	Security	WEP, WPA(AES,TKIP), WPA-PSK(AES, TKIP), WSL(foregoing methods can be used simultaneity), IEEE802.1X
IEEE802.11b		
	Interface type	IEEE802.11b-compliant DSSS (Direct Sequence Spread Spectrum) method
	Channel	14ch (1~14)
	Data Speed	11, 5.5, 2, 1Mbps (automatic)
	Access Method	CSMA/CA + ACK (RTS/CTS)
	Wireless LAN category	Low-power Data Transmission System (2.4~2.497GHz)
	Aerial Power	10Mw/MHz or less
	Security	WEP, WPA(AES,TKIP), WPA-PSK(AES, TKIP), WSL(foregoing methods can be used simultaneity), IEEE802.1X
IEEE802.11g		
	Interface type	IEEE802.11a-compliant OFDM (Orthogonal Frequency Division Multiplexing) method
	Channel	13ch (1~13)
	Data Speed	54, 48, 36, 24, 18, 12, 9, 6Mbps (automatic)
	Access Method	CSMA/CA + ACK (RTS/CTS)
	Wireless LAN category	Low-power Data Transmission System (2.4~2.497GHz)
	Aerial Power	10Mw/MHz or less
	Security	WEP, WPA(AES,TKIP), WPA-PSK(AES, TKIP), WSL(foregoing methods can be used simultaneity), IEEE802.1X

Dimensions

IPC-BX800-DC400
IPC-BX800-DC45F



IPC-BX800R-DC45F



Unit: (mm)

■Specifications

Model	IPC-BX720-AC series	IPC-BX/M360(PCI)C
CPU	Intel® Cerelon® Processor 2.0GHz (FSB400MHz)	Ultra Low Voltage Intel® Cerelon® Processor 400MHz (FSB100MHz)
Chipset	Intel® 845GV	VIA CLE266 (VT8623+VT8235)
Main Memory	512MB standard *1 / Max. 2GB (1GB ×2), 2× 2.5V 184-pin DDR SDRAM PC2100 DIMM Socket	512MB *2, 1× 3.3V 200-pin DDR SO-DIMM PC2100 Socket
PC Card slot	-	1× PCMCIA Type I or II (boot from ATA card is not supported), CardBus -compliant
CF Card slot	1× CF Card Type I, II (dedicated to memory card)[Secondary-IDE Slave]	1× CF Card Type I, II (dedicated to memory card, Secondary-IDE), bootable
Ethernet	LAN1: 100BASE-TX/10BASE-T LAN2: 1000BASE-T/100BASE-TX/10BASE-T	2× 100BASE-TX/10BASE-T [Realtek RT8139DL]
Expansion Bus slot	2× PCI slot (PCI Rev2.0 -compliant)	-
System Resolution	640×480(16,770,000 colors), 800×600(16,770,000 colors), 1,024×768(16,770,000 colors), 1,280×1,024(16,770,000 colors), 1,600×1,200(16,770,000 colors)	640×480(16,770,000 colors), 800×600(16,770,000 colors), 1,024×768(16,770,000 colors), 1,280×1,024(16,770,000 colors)
CRT I/F	DVI-I 29pin *6	DVI-I 29pin *6
LCD I/F	*6	-
Keyboard I/F	Corresponding to PS/2 keyboard (6pin mini-DIN connector)	Single PS/2 connector for both keyboard and mouse (2 in 1Y-cabele included)
Mouse I/F	Corresponding to PS/2 mouse (6pin mini-DIN connector)	
FDD I/F	-	
IDE I/F	Primary: Ultra DMA/100, One 2.5-inch IDE HDD or silicon disk drive mounted [Primary IDE Master];Secondary: Equipped with a dedicated 36pin, half-pitch connector (for connection of an optional CD-ROM/DVD-ROM drive) [Secondary IDE Master] *16	Primary: Ultra DMA/133, 2.5-inch IDE HDD or silicon disk drive;Secondary: dedicated, external, 36-pin half pitch connector (for connection of optional CD-ROM) (Side in the left) *16
Serial I/F	RS-232C(general-purpose): 4ch (SERIAL PORT1, 2, 3, 4) 9 pin D-SUB connector;RS-232C(touch panel): 1ch (SERIAL PORT5) [inside the DVI connector] *7; RS-422/485(general-purpose): 1ch (SERIAL PORT6) [inside the RAS connector], Baud rate: SERIAL1, 2 is 115,200bps, SERIAL3 - 6 is 230,400bps	RS-232C (general-purpose): 2ch (SERIAL PORT1,2) 9-pin D-SUB connector; RS-232C (Touch Panel): 1ch (SERIAL PORT2) [inside the DVI connector] *8;RS-422/485 (general-purpose): 1ch (SERIAL PORT1) [inside the RAS connector] *7*9
Parallel I/F	-	
USB I/F	4ch (USB 2.0 specification)	
General-purpose I/O	3 opto-isolated inputs and outputs(However, one output also serves as an external WDT output and one input also serves as remote reset. They become available when switched.)	
Audio	AC97 compliant, Line In, Line Out, MIC: mini jack	AC97 compliant, Line Out: ϕ 3.5 Stereo mini jack, Full-scale output level 1.0Vrms(typ)
RAS function	WDT: 1sec to 255sec (RESET or external output is according to Time Expiration), Remote reset: External input signal	
RTC/CMOS	Lithium backup battery life: 10 years or more	
Supported OS	Windows XP Professional, Windows XP Embedded	Windows 2000 Professional, Windows XP Professional, Windows XP Embedded
Power Supply / Instantaneous Blackout	85 - 132VAC/170 - 264VAC(47 - 63Hz) input automatic operation switch / Less than 20ms	+10~12VDC (< ±5%)
Current Consumption (Max.)	190VA	12V 2.5A, at shutdown*11: 12V 0.27A (Max.)
Power Outage	2.0kVAC 20mA/1min	-
Dielectric Strength	50MΩ (500VDC)	-
Operating Temp. / Storage Temp. / Humidity	0~50°C<SDD in use>, 5~45°C<HDD in use> / -10~60°C / 10~90%RH (no condensation)	0~45°C<SDD in use>, 5~40°C<HDD in use> / -10~60°C / 10~90%RH (no condensation)
Floating Dust Particles / Corrosive Gases	Normal / None	
Noise resistance — Atmospheric discharge	Contact discharge / ±4kV (IEC61000-4-2Level2, EN61000-4-2Level2), Atmospheric Discharge / ±8kV (IEC61000-4-2Level3, EN61000-4-2Level3) *13	Contact discharge / ±4kV (IEC1000-4-2Level2, EN61000-4-2Level2), Atmospheric Discharge / ±8kV (IEC1000-4-2Level3, EN61000-4-2Level3)
Noise resistance — Line-noise	AC line/±2kV, Signal line/±1kV (IEC61000-4-4Level 3, N61000-4-4Level 3)	-
Vibration Resistance — Sweep Resistance	10 - 57Hz/semi-amplitude 0.15mm 57 - 150Hz/2.0G,40 min. each in x, y, and z directions(JIS C0040-compliant, IEC68-2-6-compliant) *14*15	HDD in use:10~50Hz / 0.5G, 25min each in x, y, z directions (JIS C0040, IEC68-2-6 compliant) *14; HDD not in use:10~57Hz / semi-amplitude 0.15mm, 57~150Hz / 2.0G, 40min each in x, y, and z directions S C0040, IEC68-2-6 compliant) *15
Impact Resistance *12*15*16	10G, half-sine shock for 11 milliseconds in x, y, and z directions(JIS C0041 -compliant, IEC68-2-27 -compliant)*13	10G, half-sine shock for 11milliseconds in x, y, and z directions (JIS C0041 -compliant, IEC68-2-27 -compliant)
Grounding	Class D grounding (previous class 3 grounding)	
Dimensions (mm)	242(W)×262(D)×115(H)	146(W)×157(D)×64(H)
Weight	Approx. 5.6kg (without Memory Storage)	Approx. 1.5kg (without Memory Storage)

Note:

*1: 512 memory is preinstalled in 1 socket.
*2: 512 memory is preinstalled in 1 socket. Additional memory is not supported.
*3: 256 memory is preinstalled in 1 socket
*4: ISA expansion slot does not support -5V, IOCHK, REFRESH and MSTER signals. (PCI bus slot: 32 bit spec.)
*5: Not supported under Windows NT Workstation 4.0 or Windows NT Embedded 4.0
*6: The unit be connected to CONTEC panel link input type display (using an optional cable) or to a normal analog RGB input display (using the attached DVI-analogue RGB conversion adapter).
*7: The interface can be used with a CONTEC panel link specification compliant touchscreen displays.
*8: COM 1 cannot be set to both RS-232C and RS-422/485 simultaneously. (factory setting is RS-232C)
*9: The RS-232C port and touch panel functions on COM 2 cannot be used simultaneously. (factory setting is touch panel function)
*10: Serial ports 3 and 4 can be used as general-purpose RS-232C ports byreplacing the bracket (Bundled). In that case, the Touch Panel, RAS functions (WDT time-out output and remote reset input), RS-422/485, general-purpose input, and parallel interfaces are disabled.
*11: When in ATX mode
*12: When FDD is not used. (Exclusive of IPC-BX/M630(PCI)C)
*13: CPU heat sink and the duct opening are excluded.
*14: When the HDD is not in use.
*15: Compatibility has been checked under applicable test conditions. However, we do not warrant normal operation under all conditions. Nor do not we warrant resistance to resonance due to the proximity of frequency.
*16: Hard disk, silicon disk cannot be added.

Box-PCs
Panel-PCs
Flat Panel Displays
Silicon Disk Drives
Option
Box PCs &Panel PCswith Windows CE
Single Board Computer
Chassis / Backplane
Analog I/O
Digital I/O
Counter & Motion Controller
Serial Communication
GPIB Communication
Remote I/O
Expansion Unit / Bus Adapter
Software
Accessories & Cables
Distributed Monitor & Control Network: F&eIT
Multi-Programmable Display
Wireless LAN
Remote Monitoring Solution
Service & Products

IPC-BX 800
IPC-BX 720
IPC-BX 360
IPC-BX 700
IPC-BX 620
IPC-BX 630

BOX-PCs

■Specifications

Model	IPC-BX700-AC IPC-BX700P2-AC IPC-BX700P4-AC	IPC-BX/M620(PCW)C IPC-BX/M620(PCW)CP	IPC-BX/M630(PCI)C IPC-BX/M630(PCI)CP IPC-BX/M630(PCI)C4P
CPU	Ultra Low Voltage Intel® Cerelon® M Processor 1.0GHz (FSB400MHz)	Ultra Low Voltage Intel® Cerelon® Processor 400MHz (FSB100MHz)	Low Voltage Intel® Pentium® III Processor 800MHz (FSB133MHz)
Chipset	Intel® 855GME	Intel® 815E	Intel® 815E
Main Memory	512MB standard / Max. 1GB, 1× 2.5V 184-pin DDR SDRAM PC2700 DIMM Socket	256 MB standard *3 / Max. 512MB, 2× 3.3V 144-pin SO-DIMM PC100 Socket	256 MB standard *3 / Max. 512MB, 2× 3.3V 144-pin SO-DIMM PC133 Socket
PC Card slot	-	2× PCMCIA Type I, II or 1× Type III (boot from ATA card is not supported), CardBus -compliant	
CF Card slot	1× CF Card Type I (dedicated to memory card) [Secondary-IDE Slave], bootable	-	
Ethernet	100BASE-TX/10BASE-T (Intel ICH4)	1× 100BASE-TX / 10BASE-T (Intel ICH2)	
Expansion Bus slot	IPC-BX700-AC: None IPC-BX700P2-AC: 2× PCI/ISA slot, Installable board length: 240mm (Max.) IPC-BX700P4-AC: 4× PCI/ISA slot, Installable board length: 240mm (Max.)	IPC-BX/M620(PCW)C: None IPC-BX/M620(PCW)CP: 2× PCI/ISA slot *4, Installable board length: 240mm (Max.)	IPC-BX/M630(PCI)C: None IPC-BX/M630(PCI)CP: 2× PCI slot, Installable board length: 240mm (Max.) IPC-BX/M630(PCI)C4P: 4× PCI slot, Installable board length: 240mm (Max.)
System Resolution	640×480(16,770,000 colors), 800×600(16,770,000 colors), 1,024×768(16,770,000 colors), 1,280×1,024(16,770,000 colors), 1,600×1,200(16,770,000 colors)	640×480(16,770,000 colors), 800×600(16,770,000 colors), 1,024×768(16,770,000 colors), 1,152×864(16,770,000 colors), 1,280×960(16,770,000 colors)*5, 1,280×1,024(16,770,000 colors)	
CRT I/F	15-pin HD-SUB connector	DVI-I 29pin *6	
LCD I/F	-		
Keyboard I/F	Corresponding to PS/2 (6pin mini-DIN connector)	Corresponding to PS/2 keyboard (6pin mini-DIN connector)	
Mouse I/F		Corresponding to PS/2 mouse (6pin mini-DIN connector)	
FDD I/F	-	Dedicated 26pin, half pitch connector - 2 modes (optional FDD - PC-FDD25BH)	
IDE I/F	Primary: Ultra DMA/100, One 2.5-inch IDE HDD or silicon disk drive mounted [Primary IDE Master];Secondary: Dedicated 40-pin, half-pitch connector (for an optional CD-ROM/DVD-ROM drive) (Side in the right) *16	Primary: Ultra DMA/100, 2.5-inch IDE HDD or silicon disk drive (One more unit can be added. Either of the two must be a silicon disk drive.) Secondary: Dedicated 40-pin half pitch connector (for an optional CD-ROM) (Side in the right)	
Serial I/F	RS-232C(general-purpose): 4ch (SERIAL PORT1, 2, 3, 4) 9 pin D-SUB connector	RS-232C (general-purpose): 2ch (SERIAL PORT1,2) 9-pin D-SUB connector, RS-232C (Touch Panel): 1ch (SERIAL PORT2) [inside the DVI connector] *7*10, RS-422/485 (general-purpose): 1ch (SERIAL PORT1) [inside the RAS connector] *10;	
Parallel I/F	-	Bi-directional, Centronics-compliant, 25-pin D-SUB connector *6	
USB I/F	6ch (USB 2.0 specification)	2ch (USB 1.1 specification)	
General-purpose I/O	-	3× opto-isolated input and output (Limitations: 1× output also serves as an external WDT output and 1× input also serves as remote reset)	
Audio	AC97 compliant, Line In, Line Out, MIC: mini jack		
RAS function	WDT: software programable, 255 level (1sec to 255sec); RESET when time-up occurs	WDT: 1sec to 255sec (RESET or external output is according to Time Expiration), Remote reset: External input signal	
RTC/CMOS	Lithium backup battery life: 10 years or more		
Supported OS	Windows XP Professional, Windows XP Embedded	Windows 2000 Professional, Windows NT Workstation 4.0, Windows XP Embedded, Windows NT Embedded 4.0	
Power Supply / Instantaneous Blackout	85 - 132VAC/170 - 264VAC(47 - 63Hz) input automatic operation switch / Less than 20ms		
Current Consumption (Max.)	IPC-BX700-AC: 50VA IPC-BX700P2-AC: 90VA IPC-BX700P4-AC: 115VA	IPC-BX/M620(PCW)C: 50VA IPC-BX/M620(PCW)CP: 90VA	IPC-BX/M630(PCI)C: 50VA IPC-BX/M630(PCI)CP: 90VA IPC-BX/M630(PCI)C4P: 115VA
Power Outage	2.0kVAC 20mA/1min		
Dielectric Strength	50MΩ (500VDC)		
Operating Temp. / Storage Temp. / Humidity	0~50°C<SDD in use>, 5~45°C<HDD in use> / -10~60°C / 10~90%RH (no condensation) *12		
Floating Dust Particles / Corrosive Gases	Normal / None		
Noise resistance: Atmospheric discharge	Contact discharge / ±4kV (IEC1000-4-2Level2, EN61000-4-2Level2), Atmospheric Discharge / ±8kV (IEC1000-4-2Level3, EN61000-4-2Level3)		
Noise resistance: Line-noise	AC Line / ±2kV, Signal Line / ±1kV (IEC1000-4-4Level3, EN61000-4-4Level3)		
Vibration Resistance / Sweep Resistance	10 - 57Hz/semi-amplitude 0.15mm 57 - 150Hz/2.0G, 40min each in x, y, and z directions(JIS C0040 compliant, IEC68-2-6 compliant) *14*15	10~57Hz / semi-amplitude: 0.15mm, 57~150Hz / 2.0G, 80min each in x, y, z directions (JIS C0040 compliant, IEC68-2-6 compliant) *14*15	
Impact Resistance *12*15*16	10G, half-sine shock for 11ms in x, y, and z directions (JIS C0041 compliant, IEC68-2-27 compliant)*13		
Grounding	Class D grounding (previous class 3 grounding)		
Dimensions (mm)	IPC-BX700-AC: 262(W)×262(D)×55(H) IPC-BX700P2-AC: 262(W)×262(D)×115(H) IPC-BX700P4-AC: 262(W)×262(D)×160(H)	IPC-BX/M620(PCW)C: 262(W)×262(D)×55(H) IPC-BX/M620(PCW)CP: 262(W)×262(D)×115(H)	IPC-BX/M630(PCI)C: 262(W)×262(D)×55(H) IPC-BX/M630(PCI)CP: 262(W)×262(D)×115(H) IPC-BX/M630(PCI)C4P: 262(W)×262(D)×180(H)
Weight	IPC-BX700-AC: Approx. 3.3kg IPC-BX700P2-AC: Approx. 4.0kg IPC-BX700P4-AC: Approx. 4.6kg	IPC-BX/M620(PCW)C: Approx. 3.3kg IPC-BX/M620(PCW)CP: Approx. 4.2kg	IPC-BX/M630(PCI)C: Approx. 3.3kg IPC-BX/M630(PCI)CP: Approx. 4.2kg IPC-BX/M630(PCI)C4P: Approx. 5.0kg

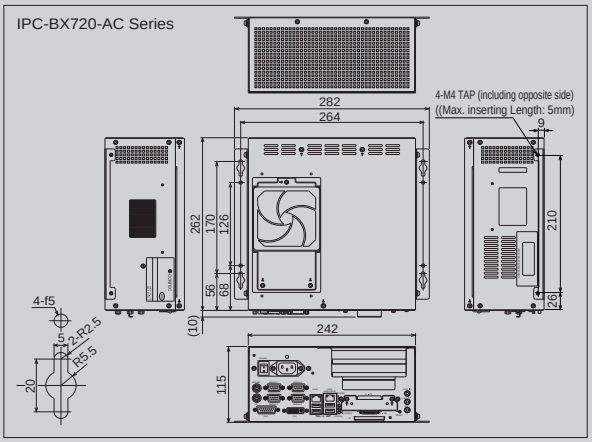
Note:

*1: 512MB memory is preinstalled in 1 socket.
*2: 512MB memory is preinstalled in 1 socket. Additional memory is not supported.
*3: 256MB memory is preinstalled in 1 socket.
*4: ISA expansion slot does not support -5V, IOCHK, REFRESH and MSTER signals. (PCI bus slot: 32 bit spec.)
*5: Not supported under Windows NT Workstation 4.0 or Windows NT Embedded 4.0
*6: The unit be connected to CONTEC panel link input type display (using an optional cable) or to a normal analog RGB input display (using the attached DVI-analogue RGB conversion adapter).
*7: The interface can be used with a CONTEC panel link specification compliant touchscreen displays.
*8: COM 1 cannot be set to both RS-232C and RS-422/485 simultaneously. (factory setting is RS-232C)
*9: The RS-232C port and touch panel functions on COM 2 cannot be used simultaneously. (factory setting is touch panel function)
*10: Serial ports 3 and 4 can be used as general-purpose RS-232C ports byreplacing the bracket (Bundled). In that case, the Touch Panel, RAS functions (WDT time-out output and remote reset input), RS-422/485, general-purpose input, and parallel interfaces are disabled.
*11: When in ATX mode
*12: When FDD is not used. (Exclusive of IPC-BX/M630(PCI)C)
*13: CPU heat sink and the duct opening are excluded.
*14: When the HDD is not in use.
*15: Compatibility has been checked under applicable test conditions. However, we do not warrant normal operation under all conditions. Nor do not we warrant resistance to resonance due to the proximity of frequency.
*16: Hard disk, silicon disk cannot be added.

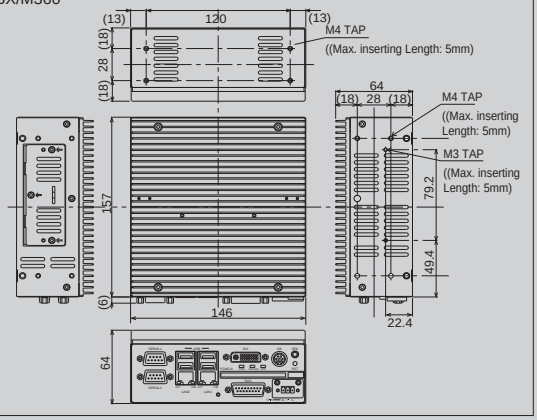
BOX-PCs

Dimensions

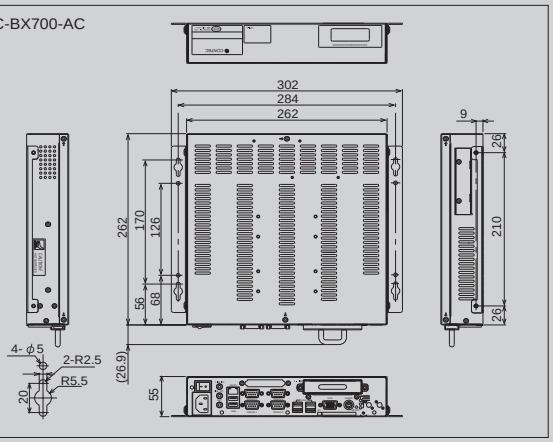
IPC-BX720-AC Series



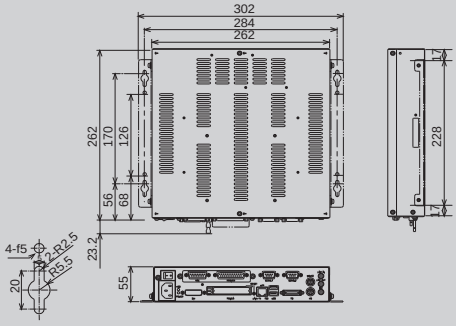
IPC-BX/M360



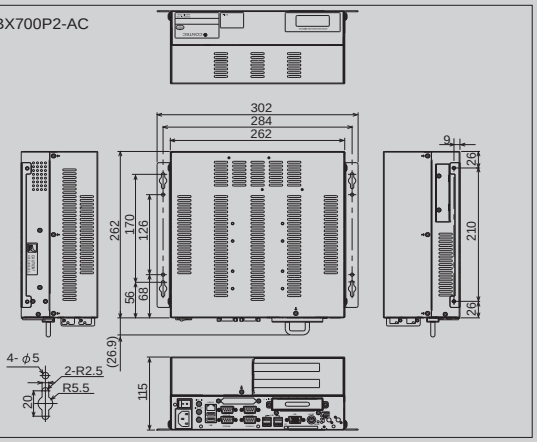
IPC-BX700-AC



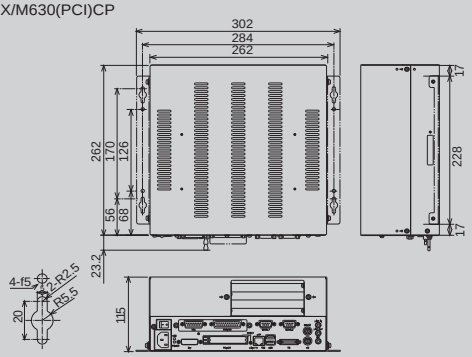
IPC-BX/M620(PCW)C
IPC-BX/M630(PCI)C



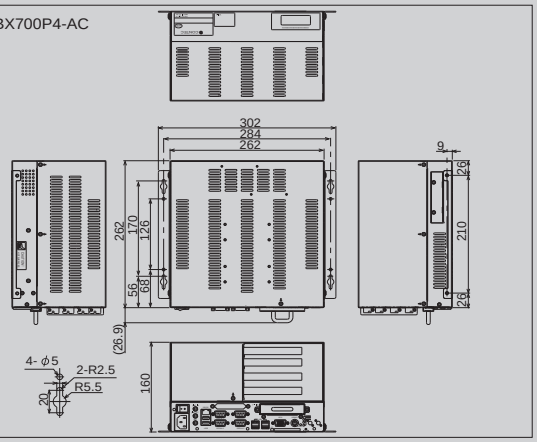
IPC-BX700P2-AC



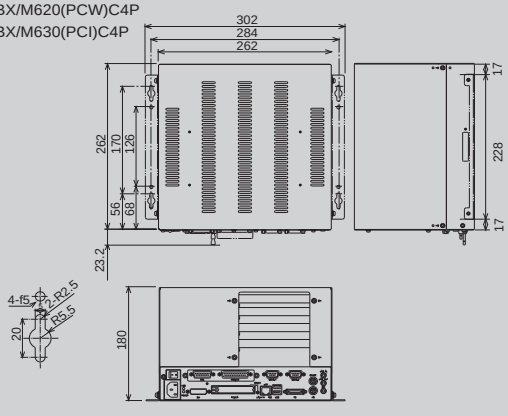
IPC-BX/M620(PCW)CP
IPC-BX/M630(PCI)CP



IPC-BX700P4-AC



IPC-BX/M620(PCW)C4P
IPC-BX/M630(PCI)C4P



Unit: (mm)

Box-PCs
Panel-PCs
Flat Panel Displays
Silicon Disk Drives
Option
Box PCs &Panel PCswith Windows CE
Single Board Computer
Chassis / Backplane
Analog I/O
Digital I/O
Counter & Motion Controller
Serial Communication
GPIB Communication
Remote I/O
Expansion Unit / Bus Adapter
Software
Accessories & Cables
Distributed Monitor & Control Network: F&eIT
Multi-Programmable Display
Wireless LAN
Remote Monitoring Solution
Service & Products

IPC-BX 800
IPC-BX 720
IPC-BX 360
IPC-BX 700
IPC-BX 620
IPC-BX 630

BOX-PCs

Fan-less Compact PC, x86 Compatible Low-power CPU

Micro Controller Unit

CONTEC's micro controller supports a variety of applications and can use Microsoft Windows®, IBM PC-DOS 2000® or Linux as a platform. I/O interfaces can be extended by connecting additional device modules.

■ CPU-SB22/256(FIT)
Windows XP Embedded, 1GB CF, 256MB memory

■ CPU-SB21/256(FIT)GY
Windows XP Embedded, 512MB CF, 256MB memory

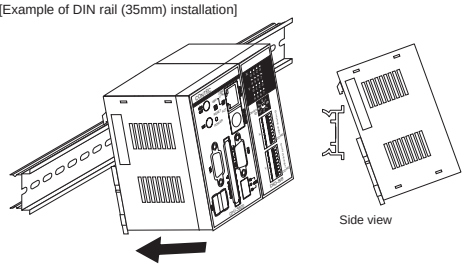
■ CPU-SB20/256(FIT)GY
Windows/PC-DOS/Linux, 256MB memory

■ CPU-SB20/128(FIT)GY
Windows/PC-DOS/Linux, 128MB memory

You can build a Windows XP or Windows XP 2000 SP3/SP4 environment on the CPU-SB20/xx(FIT)GY by installing the OS using a retail USB-based CD-ROM drive or FDD without using the development kit. You can also install another OS such as DOS when using a USB CD-ROM drive supported by a startup disk for the OS.

CPU-SB22/256(FIT)

[Example of DIN rail (35mm) installation]


Side view

Features

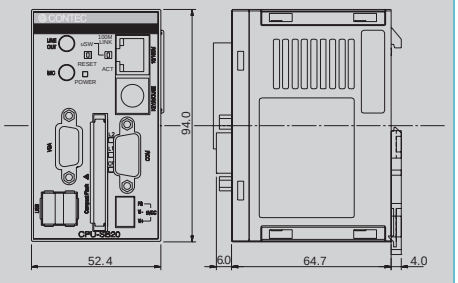
● Compact and Space-saving
All the functions and extendability of a full size PC but small enough to fit into a 94mm (H) by 64.7mm (D) space. Easily configurable, CONTEC's micro-controller unit uses commercial operating systems.

● Easily accessible Ideal for industrial environments
Operating with no hdd (uses Compact Flash) or fan, this unit is designed to fit on standard 35mm DIN rails, requiring little installation space. It is equipped with a watchdog timer, an essential component in any industrial system. All interfaces (excluding F&eIT bus) are located at the front side of the unit to ensure easy accessiblilty.

● Expandable
Designed to recognize the compact flash (or micro drive) as the 'C' drive this unit can run on commercial operating systmes. The I/O interfaces can be extended by connecting device modules through the interconnections on the sides of the unit, These side-connectors are the system 'bus' so no additional backplane is needed.

■ Interfaces

CPU-SB22/256(FIT)
CPU-SB21/256(FIT)GY
CPU-SB20/128(FIT)GY
CPU-SB20/256(FIT)GY



* Figure CPU-SB20(FIT)GY

■Specifications

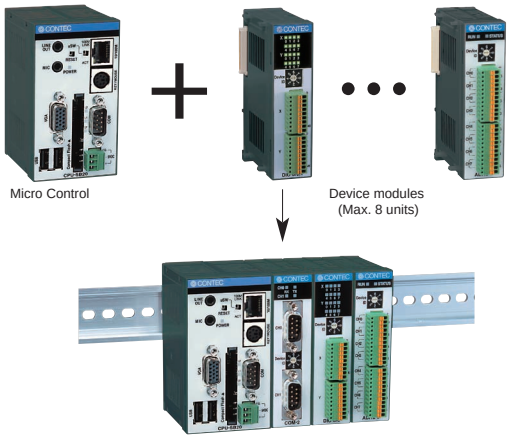
Model	CPU-SB22/256(FIT) CPU-SB21/256(FIT)GY	CPU-SB20/256(FIT)GY CPU-SB20/128(FIT)GY
CPU	Geode SC2200 266MHz	
Memory		
L2 CACHE	-	
Main	256Mbyte	CPU-SB20/256(FIT)GY: 256Mbyte CPU-SB20/128(FIT)GY: 128Mbyte
Video		
Controller	built into the CPU chip	
VRAM	4Mbyte Equivalency	
CRT I/F	15-pin HD-SUB Connector: 640×480 / 800×600 (65,536 colors), 1024×768 (65,536 colors), 1280×1024 (256 colors)	
Interfaces	RS-232C, 100BASE-TX/10BASE-T, Audio (Line output, Mic input), USB×2, Keyboard, Mouse, F&eIT Bus	
WATCHDOG Timer Function	16,666sec (Max.) Programmable (RESET or output to NMI in accordance with the time of Time-up)	
Compact Flash Slot	TYPE I or TYPE II ×1	
RTC/CMOS	Lithium backup Battery life: 25 years or more (25ºC), Precision of Real Time Clock: within 3 minutes/per month	
OS	Windows XP Embedded preinstalled (CONTEC original specification)	Checked OS IBM PC-DOS 2000 Ver.7.0J *1, Microsoft Windows 98 SE, Microsoft Windows Me, Microsoft Windows 2000, Microsoft Windows XP Embedded, Linux 2.4 Kennel *1
Power Consumption (Max.)	5VDC±5%, 1.5A	
Dimensions (mm)	52.4(W) × 64.7(D) × 94.0(H)	
Weight	300g	
Operating Temp. / Storage Temp. / Humidity	0 to 50°C / -10 to 60°C / 10 to 90%RH (no condensation)	
Floating Dust Particles / Corrosive Gases / Grounding	Normal / None / Class D grounding (previous class 3 grounding)	
Noise resistance Line-noise *2	AC Line / 2kV, Singel Line / 1kV (IEC1000-4-4Level3, EN61000-4-4Level3)	

*1: Basic OS functions and the operation of VGA/LAN driver are already checked. However, we do not warrant the operation of all the functions.
*2: When POW-AD22GY is used.

BOX-PCs

Expanding the Micro controller

System configurations to fit most any application can by made by connecting the micro controller with one or more of Contec's expansion modules to provids needed I/O functions.



Combination example

For configuration specifics, please refer to the controller / device module compatibility chart on Page R-04.

Bundled software

API-SBP(W32)

Windows® Driver Library for Device Module Access

API-SBP(W32) driver software provides commands in Windows® standard Win32API(DLL) format to device modules which are stack-connected to a micro controller.
A diagnostics monitor allows you to confirm operation without the aid of any additional programming.
You can also develop programs using programming languages that support Win32API(DLL) including Visual Basic and Visual C++.

- Supports digital / analog I/O, counters, GPIB / serial communication and temperature sensor input device modules.
- Highly compatible with API-PAC(W32) the driver library for CONTEC interface boards / cards.
- Supports English and Japanese versions of Windows® XP / XP Embeded / 2000 / Nt4.0 / Me / 98 / 98 Second Edition / 95 OSR2/95.
- Includes Visual Basic and Visual C++ sample programs

Options

Compact Flash for FIX DISK

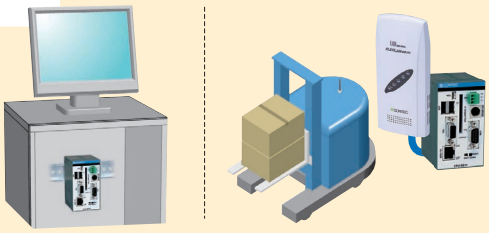
CF-1GB
Compact Flash memory 1GB

CF-1GB

CF-512MB
Compact Flash memory 512MB

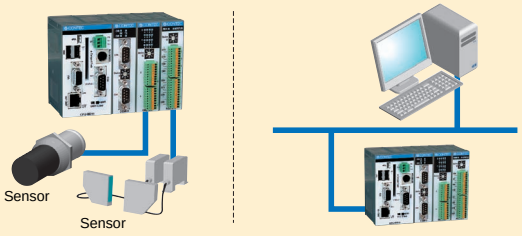
CF-512MB

Application Example 1



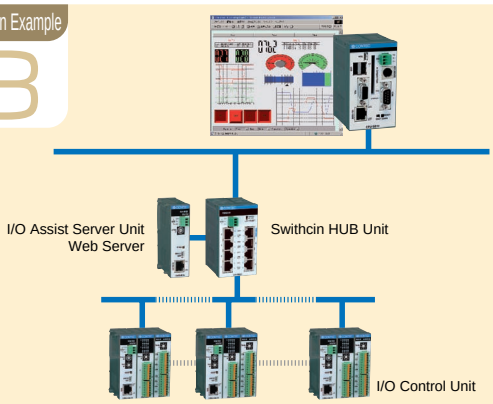
This unit can fit into spaces too small for standard PCs. In addition, using wireless LAN Micro Access Points allows you to embed this unit in mobile hardware or areas where wiring would be difficult. Since the micro controller runs on 5VDC it is ideal for areas with limited power.

Application Example 2



Through the use of the Device Module, these can be used as compast controllers supporting a variety of I/O or as a programmable ethernet-based remote I/O system.

Application Example 3



CONTEC's micro controller can serve as a compact web monitoring terminal (client PC) when interconnected with device modules.

Micro Controller Unit Development Kit

DTK-SB20(FIT)GY

for the CPU-SB20(FIT)GY series

FDD, HDD and CD-ROM are standard features with the development kit, useful in the customization of operating systems that are not supported on the CPU-SB20(FIT)GY as a standalone unit.

For further details, please visit our website:
http://www.contec.com/fit/

An additional catalogue "Distributed Supervision and Control Network" is available.
You can order it at on our Web site.

Box-PCs
Panel-PCs
Flat Panel Displays
Silicon Disk Drives
Option
Box PCs &Panel PCswith Windows CE
Single Board Computer
Chassis / Backplane
Analog I/O
Digital I/O
Counter & Motion Controller
Serial Communication
GPIB Communication
Remote I/O
Expansion Unit / Bus Adapter
Software
Accessories & Cables
Distributed Monitor & Control Network: F&eIT
Multi-Programmable Display
Wireless LAN
Remote Monitoring Solution
Service & Products

IPC-BX 800
IPC-BX 720
IPC-BX 360
IPC-BX 700
IPC-BX 620
IPC-BX 630

BOX-PCs

Compact CPU Unit embedded in MELSEC-Q Series

PC CPU Unit for MELSEC-Q Series of MITSUBISHI PLC

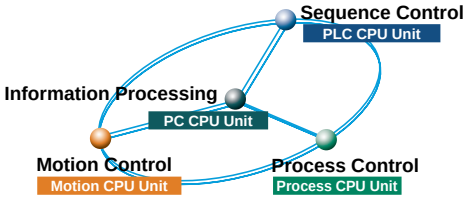
The CPU unit is a PC/AT compatible PC that can be embedded in the MELSEC-Q Series of Mitsubishi Electric, Ltd. It can calculate a mass of data. With the PC CPU Unit, better programming will be realized in IT industries that need to deal with abundant data, or control the processes, such as Semiconductor, Liquid Crystal, Electric Hardware Manufacturer, etc.

Model	Specifications	Product Compositions			
		PC CPU Unit	Storage Unit	Installed OS & Recovery CD	Bus Interface drive
PPC-852-21B	Storage: HDD OS: Windows 2000	CPU: Celeron M 600MHz System Memory: 512MB <PPC-CPU852(MS)-512>	Hard Disk PPC-HDD (MS) A	Windows 2000 Professional	Windows Version
PPC-852-21G	Storage: HDD OS: WindowsNT XP		Hard Disk PPC-HDD (MS) A	Windows XP Professional	
PPC-852-22F	Storage: CF OS: WindowsNT XPe		Compact Flash CF-1GB-R	Windows XP Embedded	

* The products is provided from MITSUBISHI stores.

Integration of Instrumentation, Control, Data and Information Processing

Through the multiple CPU configuration with Sequencer CPU and Motion CPU, the unit is capable of integrating sequence control, motion control and data processing in a seamless manner as well as of distributing these functions. It has various advantages over the connection using a serial communication such as eliminating extra-load during the communication processing, securing independence and significantly increasing a throughput.



High Environment Resistance and Size Reduction

Our well-reputed industrial PC technology has enabled us to downsize the unit without affecting its environment resistance. As a result, the unit can:

- Fit into two slots for use with MELSEC-Q Series.
- Exhibit FA level resistance to environment and noise.

*Size of PC CPU unit body
55.2(W)×115.0(D)×98.0(H) mm
(Exclusive of any protrusions)

- The CF card model with Windows XP Embedded not only does not need Disk unit but also pursue compactification.

Excellent Expandability

- CPU: Ultra Low Voltage Intel® Cerelon® M Processor 600MHz, OS: Microsoft® Windows® XP Embedded / XP Professinal / 2000 Professional.
- PC Standard interfaces include not only Ethernet, USB, PC Card, but also CF card slot (Type I/II) that the device can boot from.

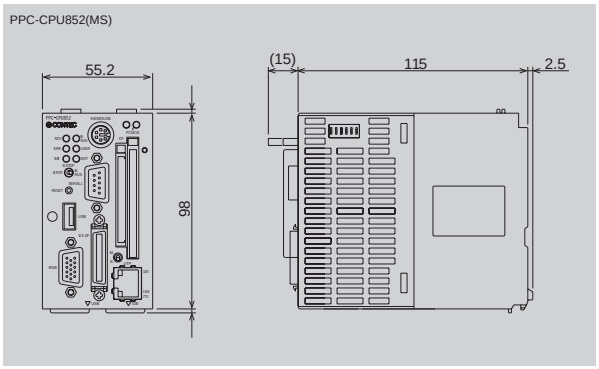
Compatible with EZSocket (Communication middleware for Mitubishi FA)

These products support EZSocket, the communication middleware for Mitubishi FA such as PLC, motion controller, CNC, robot and inverter.

EZSocket

PPC series products can be purchased at Mitsubishi electronics agencies. Neither CONTEC nor our agents sell these products.

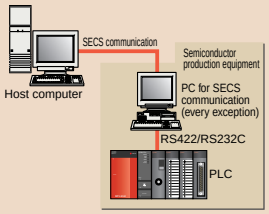
Dimensions



Sample Application Semiconductor Equipment - General -

Before

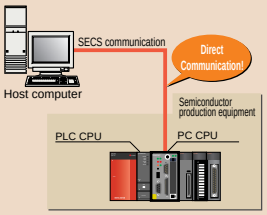
When using a conventional PLC in semiconductor equipment, dedicated communication equipment (such as a PC) had to be installed to establish SECS communication along with an additional host computer, thus requiring extra installation space.



With PC CPU installed

After

- The PC CPU equipped with a PLC base requires no additional PC for establishing SECS communication, thus offering a simpler configuration.
- The device requires less controller space. (Footprint reduction)
- Utilization of a commercial SECS communication package via a PLC bus is currently planned.



BOX-PCs

Specifications

Item		Specification
CPU		Ultra Low Voltage Intel Cerelon M Processor 600MHz (FSB400MHz)
Chipset		Intel 852GM
Memory	L1 Cache	32KB ×2
	L2 Cache	512KB
	Main Memory	512MB
video	Controller	built in 852GM
	Video RAM	Main memory shared (max. 64MB)
	CRT I/F	Analog RGB 15-pin HD-SUB connector
	Specification	

	VGA (640×480)	SVGA (800×600)	XGA (1024×768)	SXGA (1280×1024)
Horizontal synchronous frequency	31.5KHz	37.9KHz	48.4KHz	64.1KHz
Vertical synchronous frequency	60Hz	60Hz	60Hz	60Hz
Number of colors	16,777,215	16,777,215	16,777,215	16,777,215

Item		Specification
IDE	Primary	40-pin half connector (can connect to 2 devices in maximum) *1
	Secondary	Not support
Serial		RS-232C Compliant: 2ch (9-pin D-SUB connector and EX.I/F) Transfer rate: 50 - 115,200bps
Parallel		1ch (in the EX I/F), Supported Mode: Normal, SPP, EPP 1.7/1.9, ECP
LAN	I/F	Ethernet 10BASE-T / 100BASE-TX RJ-45connector
	Controller	82551QM [Intel]
PC Card	Controller	R5C485 [RICOH]
	Card Type	PCMCIA, CardBus
	Card Slot	Type I, II ×1
	Display *2	Card recognized LED (green)
CF Card slot *3		1× CF CARD Type I, II (dedicated to memory card) (Primary IDE); PrimaryMaster, PrimarySlave switch-able
USB I/F		USB2.0, 3ch: Transfer Rate 480Mbps; 1ch(in the EX I/F): USB1.1, 2ch , Transfer Rate: 1.5M/12Mbps
Keyboard / PS/2 Mouse		6-pin mini-DIN connector (shared by keyboard and mouse) Both can be used at the same time with conversion cable KB-PSY02K3
WDT		2ch, Time-out: System SDT 10msec~10sec, User WDT 10msec~10sec
RTC/CMOS		Lithium backup battery life: 10 years or more (25°C when electrifying) Real time clock precision error: within ×3 minutes per month
LED		RDY(green), B.RUN(green), ERR(red), USER(red), BAT(orange), EXIT(green), ACCESS(green)
Operation		Reset PUSH switch, DIP switch 6 polars, 3 position toggle switch
Supported OS		Windows XP Professinal, Windows XP Embedded, Windows 2000 Professional
Base unit using slot		2 slot
Dimensions (mm)		55.2(W) × 115.0(D) × 98.0(H) (Exclusive of protrusions)
Power Consumption (Max.)		+5VDC 3.0A *4
Instantaneous Blackout		According to power supply unit
Weight		440g

*1: A total of two units can be connected at the same time.
*2: LED will lights up when system recognizes PC card, and keep lighting until system find out card has beed unmounted.
*3: A special CF card, which is different from a usual commercial product, is required when booting up Windows from a CF card. Make sure to select a CF card with a capacity sufficient to install Windows successfully.
*4: The power consumption of the peripheral devices (such as the PC card, USB device, keyboard, mouse, etc) and the connector terminal is not included.

Common Specifications

Item	Specification
Operating temperature	0~55°C
Storage temperature	-25~75°C
Operating humidity	5~95%RH (no condensation)
Storage humidity	5~95%RH (no condensation)
Vibration Resistance	JIS B 3502, IEC61131-2 compliant

Intermittent vibration		
Frequency	Acceleration	Swing
5≦f<9Hz	-	3.5mm
9≦f<150Hz	9.8m/s^2	-
Continuous vibration		
Frequency	Acceleration	Swing
5≦f<9Hz	-	1.75mm
9≦f<150Hz	4.9m/s^2	-

	10 times, 80min each in x, y, z directions
Impact Resistance	JIS B 3502, IEC61131-2 compliant (147m/s, 3 times each in 2, 3 directions)
Operating Atmosphere	None Corrosive Gases
Operating Altitude	Below 2000m *3
Place	In the Control Panel
Overvoltage Category *1	Below II
Level of pollution *2	Below 2

*1: It refers to which electric power part from public wiring nets to local machinery that this device is connecting. Catalog II is applied for a fixed devive, a power feeding device and so on.
*2: It is a guideline that implies the outbreak degree of the conductive material around the Operating environment. Level 2 of pollution means that only inconductive pollution happens.
*3: Do not use it when it is pressurized to more than a atmospheric pressure where altitude is about 0.

⚠ The spcifications of the unit an the product will accord to the lowest capability in the all devices when the unit is quipped with the peripheral equipments purchased from the markets.

Options

Item	Product	Model Name	Note
Hard Disk Unit	PC CPU Dedicated Hard Disk Unit	PPC-HDD(MS)A	
CF Card	1GB CF Card (Fixed Disk mode)	CF-1GB-R	
	2GB CF Card (Fixed Disk mode)	CF-2GB-R	
	4GB CF Card (Fixed Disk mode)	CF-4GB-R	
	8GB CF Card (Fixed Disk mode)	CF-8GB-R	
DVD/CD-ROM	DVD/CD-ROM Drive (included Cable: 400mm) *1	PPC-CDD-02	
Connection Cable	DVD/CD-ROM Connection Cable for PPC CPU852(MS) (included Cable: 400mm) *2	PPC-CDC-01	
Connector Terminal	Connector Terminal for PC CPU	PPC-COT-01	
	DIN rail adapter for Connector Terminal	PPC-DINAD-01	
Serial Conversion Cable	PC CPU Dedicated Serial Conversion Cable	PPC-SCC-01	Serial Cable
Anti-vibration Fixing Bracket	Anti-vibration Fixing Bracket for HDD	PPC-HBR-01	
Manual Set	Manual Set in Japanese	PPC-CPU852(MS)-MJ	
	Manual Set in English	PPC-CPU852(MS)-MU	

*1: Can not use the attached cable when installing OS in the CF card that connects PC CPU. Please purchase the dedicated cable (PPC-CDC-01).
*2: It needs another cable when installing OS in the CF card that connects PC CPU and IPC-CDD-02.

Difference between PPC-CPU852(MC)-512 and the conventional product [PPC-CPU686(MS)-128]

	PPC-CPU686(MS)-128 (conventional product)	PPC-CPU852(MC)-512
CPU	Low Voltage Intel Cerelon Processor 400MHz (FSB 100MHz)	Ultra Low Voltage Intel Cerelon M Processor 600MHz (FSB 400MHz)
Chipset	Intel 440BX	Intel 852GM
Main Memory	128MB	512MB
PC Card	CardBus-compliant Type I, II ×2 or Type III ×1 (ATA card bootable)	CardBus-compliant Type I, II ×1
CF Card Slot	-	CF CARD Type I, II ×1 (bootable)
USB	USB1.1 ×2	USB2.0 ×3
FDD I/F	FDD I/F ×1	-
Supported OS	Windows 2000 Professional, Windows NT Workstation 4.0, Windows NT Embedded 4.0	Windows XP Professinal, Windows XP Embedded, Windows 2000 Professional
RoHS compliant	-	RoHS compliant

BOX-PCs

Box-PCs
Panel-PCs
Flat Panel Displays
Silicon Disk Drives
Option
Box PCs &Panel PCswith Windows CE
Single Board Computer
Chassis / Backplane
Analog I/O
Digital I/O
Counter & Motion Controller
Serial Communication
GPIB Communication
Remote I/O
Expansion Unit / Bus Adapter
Software
Accessories & Cables
Distributed Monitor & Control Network: F&eIT
Multi-Programmable Display
Wireless LAN
Remote Monitoring Solution
Service & Products

IPC-BX 800
IPC-BX 720
IPC-BX 360
IPC-BX 700
IPC-BX 620
IPC-BX 630

Compact CPU Unit embedded in MELSEC-Q Series

PC CPU Unit for MELSEC-Q Series of MITSUBISHI PLC

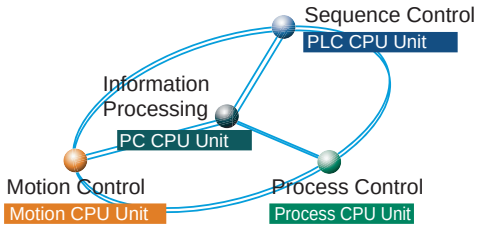
The PPC-SET-2xx ultra-compact PC was designed to be embedded in the MELSEC-Q Series from Mitsubishi Electric, Ltd. It can calculate large volumes of data. This unit helps to create an environment where better programming can be implemented in industries that need to deal with an abundance of data. Also for use in process control environments.

Model	Specifications	Product Specifications			
		PC CPU Unit	Storage Unit	Installed OS & Recovery CD	Bus Interface drive
PPC-SET-200	System Memory: 128MB Storage: None OS: Not installed	CPU: Celeron 400MHz System Memory: 128MB <PPC-CPU686(MS)-128>	-	-	Windows® Version <PPC-DRV-01>
			-	-	
PPC-SET-21A	System Memory: 128MB Storage: HDD OS: Windows®NT 4.0		Hard Disk	Windows® NT Workstation 4.0	
			<PPC-HDD(MS)>	-	
PPC-SET-21B	System Memory: 128MB Storage: HDD OS: Windows® 2000		Hard Disk	Windows® 2000 Professional	
			<PPC-HDD(MS)>	-	
PPC-SET-22C	System Memory: 128MB Storage: 320MB HDD OS: WindowsNT® e 4.0		320MB Silicon Disk	Windows® NT Embedded 4.0	
			<PPC-HDD(MS)-320>	-	

* Product is available through Mitsubishi sales channels

Integration of Instrumentation, Control, Data and Information Processing

With a CPU configuration that combines the Sequencer CPU and the Motion CPU, this unit is capable of integrating sequence and motion control. In addition to the distribution of these functions this configuration allows for seamless data processing. It has various advantages over the use of serial communications including the elimination of over-load during communication processing, providing secure independent operation and significantly increasing throughput.



PPC series products can be purchased at Mitsubishi electronics agencies. Neither CONTEC nor our agents sell these products.

Compact Size and Industrial Ruggedness

CONTEC's experience in manufacturing well-respected industrial PCs provided the blueprint for the creation of this ultra-compact unit that retains high level industrial ruggedness. This unit is:

- Small enough to fit into just two slots of the MELSEC-Q Series
- Rugged enough to exhibit automation level resistance to environment and noise

* Size of PPC-SET-2xx
55.2(W)×98.0(D)×115.0(H) mm
(2.17"×3.86"×4.53")

Expansion Capabilities

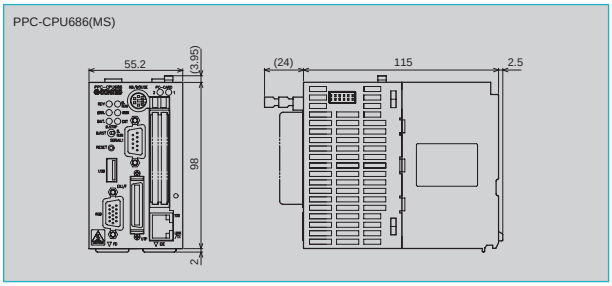
- CPU: Celeron 400MHz
OS: Windows 2000 / NT 4.0 / NT EMBEDDED 4.0
- Standard interfaces include LAN, USB and PC Card slot

Compatible with EZSocket(Communication middleware for Mitubishi FA)

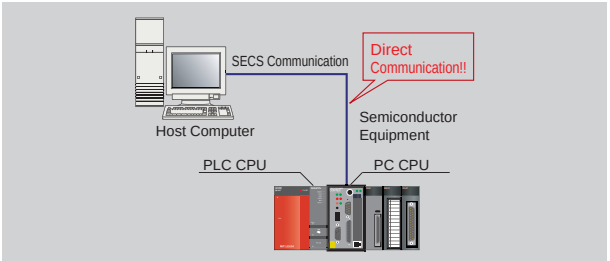
These products support EZSocket, the communication middleware for Mitubishi FA such as PLC, motion controller, CNC, robot and inverter.

EZSocket

■ Dimensions

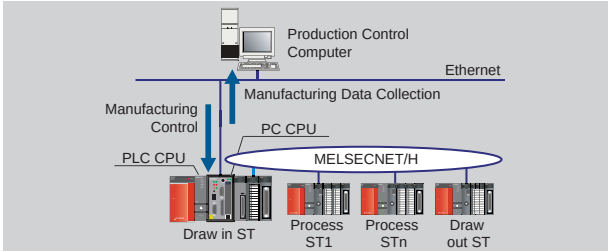


Example 1 Semiconductor Equipment "General"



The PC CPU equipped with a sequencer base establishes SECS communication without the need for additional PCs, thus allowing for simpler system configurations.

Example 2 Automotive Parts Assembly Line Processing / Manufacturing Control and Data Collection System



The FA PC functions are incorporated into a sequencer base, requiring less space and wiring.

BOX-PCs

PC CPU Unit

Common Specifications

Item	Specification
Operating temperature	0~55ºC
Storage temperature	-25~75ºC
Operating humidity	5~95% RH (no condensation)
Storage humidity	5~95% RH (no condensation)
Vibration Resistance	JIS B 3502, IEC61131-2
Impact Resistance	JIS B 3502, IEC61131-2
Corrosive gases	Not present
Operating Altitude	Below 2000m
Place	In the Control Panel
Overvoltage Category	Below 2
Level of pollution	Below 2

Specifications

Item		Specification
Model		PPC-CPU686(MS)-128
MPU		Mobile Celeron Processor -LP 400MHz [Intel] FSB:100MHz
Chip Set		440BX [Intel]
Memory	System Memory	128MB
	Cache Memory	L1:16KB L2:128KB (MPU Internal)
video	Control	B69000 [C&T]
	Support Resolution (Max.)	XGA (1024 × 768) 65,536 colors
	Memory	2MB
	I/F	Analog RGB H-Dsub 15Pin connector
I/F	USB	Ver1.1, 2ch (1ch is in the Expansion Connector), Transfer Rate: 1.5M/12Mbps
	LAN	Controller: 82559 [Intel] 10BASE-T / 100BASE-TX RJ-45connector × 1
	Serial	RS-232C, 2ch (D-SUB 9Pin, in each Expansion Connector), Transfer Rate: 50~115200bps
	Parallel	1ch(in the Expansion Connector), Corresponding Mode: Normal, SPP, EPP 1.7/1.9, ECP
	PS/2 Mouse, Keyboard	Mini DIN 6P Mouse/keyboard shared Connector Conversion Cable (KB-PSY02K3[SANWA SUPPLY]) provides simultaneous use
	FDD	26Pin half connector (for CONTEC's 3.5 inch FDD PC-FDD25BH)
	IDE	Primary: 40Pin half connector (can connect to 2 devices in Max.), Secondary: Not supported
	PC Card	Card Type: PCMCIA, CARD-BUS *1 Card Slot: Type I, II × 2 or TypeIII × 1
WDT		2ch, Time-out: about 10mSec~10Sec
Dimensions (mm)		55.2 (W) × 98.0 (H) × 115.0 (D) (Exclusive of protrusions)
Power Consumption (Max.)		+5VDC 3.0A (Max.) *2
Weight (g)		470g

Hard Disk Unit

PPC-HDD (MS)

Item	Specification
Bus Interface	IDE
Internal Drive	2.5 inch Hard Disk drive
Transmission Speed (Max.)	66.6MB/sec (Ultra DMA Mode 4), 16.6MB/sec (PIO Mode 4)
Reliability	1 × 10^{13} bits is read
Connect to PC CPU Unit	40-pin cable (included)
Expansion	Used for slave IDE device only, 40-pin half-pitch connector, can expand to on master/slave switchable IDE device.
Access signal *1	Front LED (red)
High Temperature Check	When the surrounding temperature is over 47 ± 3ºC Notice Method: High Temperature Check function of Bus Interface drive Software
Operating Temperature	5~50°C (when the rate of temperature change is less than 20ºC/h)
Dimensions (mm)	27.4 (W) × 130.0 (D) × 98.0 (H) (Exclusive of protrusions)
Power Consumption (Max.)	+5VDC 0.88A (Max.)
Weight	300g (450g when Optional Unit fixing fitting installed)
Average Longevity	5 years or over 20,000 electrizing time

*1: When using 2 disk units (hard disk unit or silicon disk unit) in a master/slave connection, the access is indicated in the same way. Access lights will be lit simultaneously when either the master or the slave unit is accessed.

Sillion Disk Unit

PPC-SDD (MS) Series

Item	Specification					
Model	PPC-SDD (MS)					
	-64	-128	-196	-320	-500	-1000
Memory Capacity	64MB *1	128MB *1	192MB *1	320MB *1	512MB *1	1GB *1
Bus Interface	IDE					
Internal drive	2.5 inch Silicon Disk drive using Flash Memory					
Transmission Speed						
ATA Interface Speed	8.0 MB/sec (when read/write)					
Memory Speed (reading)	5.0MB/sec					
Memory Speed (writing)	1.5MB/sec	3.0MB/sec				
Access Speed (reading) *2	2.0MB/sec					
Access Speed (writing) *2	1.0MB/sec	1.5MB/sec				
Reliability	1 × 10^{14} bits is read					
ECC	64 bits/Sector					
Delete/Write cycle	300,000 cycles					
Connect to PC CPU Unit	40-pin cable (included)					
Expansion	Used for slave IDE device only, 40-pin half-pitch connector, can expand to on master/slave switchable IDE device *3					
Operating Temperature	0~55°C					
Access signal *4	Front LED (red)					
Power consumption	+5VDC 0.09A (Max.)					
Dimensions (mm)	27.4 (W) × 130.0 (D) × 98.0 (H) (Exclusive of protrusions)					
Weight	Approx. 250g					

*1: 1MB=1,000,000bytes, 1GB=1,000,000,000bytes
*2: The access speed listed above is for your reference only. It may vary depending on the conditions under which the unit is used.
*3: When SDD is set as the master, you cannot use a hard disk drive or CD-ROM drive as a slave.
*4: When using 2 disk units (hard disk unit or silicon disk unit) in a master/slave connection, the access is indicated in the same way. Access lights will be lit simultaneously when either the master or the slave unit is accessed.

Optional Items

Product	Product	Model Name	Note
Hard Disk Unit	5GB Hard Disk Unit	PPC-HDD(MS)	
Silicon Disk Unit	64MB Silicon Disk	PPC-SDD(MS)-64	
	128MB Silicon Disk	PPC-SDD(MS)-128	
	192MB Silicon Disk	PPC-SDD(MS)-196	
	320MB Silicon Disk	PPC-SDD(MS)-320	
	512MB Silicon Disk	PPC-SDD(MS)-500	
	1024MB Silicon Disk	PPC-SDD(MS)-1000	
CD-ROM	CD-ROM Drive (included Cable)	PPC-CDD-02	Unit can not be placed on side with CD-ROM in use
Floppy	3.5-inch FDD (included Cable: 60cm)	PC-FDD25BH	
Connector Terminal	Connector Terminal (included Cable)	PPC-COT-01	
	DIN rail adapter for Connector Terminal	PPC-DINAD-01	
Serial Conversion Cable	Serial Conversion Cable	PPC-SCC-01	Serial Cable
Anti-vibration Fixing Bracket	Anti-vibration Fixing Bracket for HDD	PPC-HBR-01	
Manual Set	Manual Set in Japanese	PPC-CPU686(MS)-MJ	
	Manual Set in English	PPC-CPU686(MS)-MU	